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Anthracite and Bituminous Coal

LETTER FROM THE FEDERAL TRADE COMMISSION

TRANSMITTING

IN RESPONSE TO SENATE RESOLUTIONS ADOPTED JUNE 22,
1916, AND APRIL 30, 1917, RESPECTIVELY, A REPORT AND REC-
COMMENDATIONS ON THE ANTHRACITE AND BITUMINOUS COAL
SITUATION AND THE RELATION OF RAIL-AND-WATER
TRANSPORTATION TO THE PRESENT
FUEL PROBLEM



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JUNE 20, 1917.—Referred to the Committee on Interstate Commerce
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WASHINGTON
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RECOMMENDATIONS OF THE COMMISSION.

The PRESIDENT OF THE SENATE.

SIR: The Federal Trade Commission transmits herewith a report and recommendations on the anthracite and bituminous coal situation and the relation of rail-and-water transportation to the present fuel problem.

By direction of the United States Senate, as expressed in Senate resolution adopted June 22, 1916, Sixty-fourth Congress (Senator Hitchcock), and Senate resolution adopted April 30, 1917, Sixty-fifth Congress (Senator Calder), the Federal Trade Commission has been engaged in investigation of the production, distribution, and price of anthracite coal.

The Commission has made preliminary reports both to the Senate and to the House of Representatives (S. Doc. 19 and H. Doc. 152, 65th Cong.) during the course of its inquiry, but is now brought to the conclusion that a report upon anthracite coal can not be complete unless it considers also the relation of bituminous coal, and conversely, that a report on bituminous coal will be incomplete without consideration of the conditions surrounding the production, price, and distribution of anthracite.

In the progress of its several investigations the Commission has held many public hearings, and has taken the testimony of hundreds of witnesses, which have included mine operators, representatives of miners' labor organizations, wholesale and retail dealers in coal, large consumers of coal, and railroad officials. Its agents have spent much time in field investigation and the Commission has received a mass of communications and reports.

While conducting its various inquiries the Commission has exerted all the powers which have been conferred upon it by Congress in an effort to soften hard conditions.

It is fair to say that, as a general rule, the various parties to the anthracite coal industry have evidenced a desire to cooperate with the Commission, and while by reason of the war emergency the Commission has at times pressed its activities in the public interest to the limit of the authority granted to it by Congress, there has been no serious disposition to question whether or not it has tended to exceed its powers.

In the anthracite industry the Commission has elaborated a system for tracing the coal from the point of its production on through all intermediate hands and finally to its point of consumption. Weekly reports are required from producers and jobbers, wherever needful, with the result that, as regards domestic sizes, high-premium coal has largely been eliminated from the market and speculation and inordinate profits have been cut out in the wholesale trade in these sizes.

During the first two months of the coal year of 1917 (April and May) there has been an increase in the production of anthracite of 2,433,000 tons as compared with the first two months of the coal year of 1916. This is an increase of 24 per cent, and should have been translated into a distinctly favorable condition of the market.

However, faulty rail and water transportation and conditions in the bituminous industry and in the production, control, distribution, and use of coke have been such that much of the gain which should have been secured by the efforts of the Commission, aided by the intelligent and willing cooperation of a great majority of the interests engaged in the production and distribution of anthracite coal, has been lost—this for the reason that though the anthracite market has been filled with a supply which should be adequate for its normal use, the acute shortage of supply in bituminous and in coke, together with faulty distribution and speculation, have driven bituminous and coke prices up to a point which has put anthracite into competition with the other two forms of fuel.

The close supervision of anthracite thus fails of a remedy so long as bituminous runs wild, and the Commission's plan as to anthracite can not be extended over the bituminous industry because of the wide field and the great variation in conditions. The Commission is nevertheless continuing its efforts and will continue them vigorously pending the solution of the whole fuel problem by Congress.

Coincident with the Commission's supervision of the price of domestic sizes of anthracite the proportion of domestic sizes produced has fallen off sharply. Domestic sizes composed 66 per cent of the total production in January to April, and have fallen to only 61 per cent in May. In the case of the independent operators, the fall is from 69 per cent to 59 per cent. This appears to indicate a crushing of domestic sizes in the breaker to supply steam sizes, the price of which the Commission has been unable to curb. If this practice should continue, it will constitute another evil omen for the future of the domestic user.

Thus the stores of anthracite coal which now should be accumulating against next winter for domestic use are being used for steam making in the place of bituminous coal; are being used in various manufacturing processes in the place of coke, and are being used by

public-service corporations for the production of water gas, because such anthracite is easier to obtain and at favorable prices as compared with bituminous and coke.

Whatever measure of success has marked the efforts of the Commission with relation to anthracite coal has been largely because the car supply has been adequate by reason of the close corporate relation between rail transportation and anthracite production.

Quite the contrary condition exists with relation to bituminous and rail transportation and with relation to water transportation as to both kinds of coal.

The production of bituminous coal for the first two months of the coal year of 1917 (April and May) has shown a large increase, but not nearly so large as the increase in industrial consumption and not nearly so large as the possible and economical output of mines already opened and in partial operation.

The present production of bituminous coal the country over is about 40 per cent short of the possible maximum, and this limitation is solely to be charged, as to primary cause, to faulty rail transportation. The present demand for coal is unprecedented, but the mines now open are capable of filling this demand if adequate car supply is furnished.

It is a fact in the bituminous industry that the capacity of a mine for production and the capacity of labor is limited absolutely by the supply from day to day of coal cars for the moving of the product. Thus we have found that, with the market at unheard-of prices, labor is often standing idle at the mines and production is limited as compared with the possible productive capacity.

We find that mine labor is being disorganized by reason of irregular employment and forced idleness, and that in some fields bituminous mines are working only three or four days a week and that willing labor and willing operators are standing idle half the time.

In other fields where there is now a more nearly adequate car supply the irregularity of car supply in months past has so disorganized and discouraged labor that these mines are not now nearly at full capacity of production. The irregularity and uncertainty of employment has caused the miners to be tempted to leave the mines and go into other employment, and, having left, it is difficult to bring them back.

The Commission believes that there are enough coal cars in the country but that there are not enough coal cars delivered to the mines, and that an inadequate supply having been delivered to the mines and loaded, these cars are not moved to the point of consumption either with the greatest of expedition nor are they promptly discharged upon their arrival at their destination.

The Commission has much testimony of widespread abuse in the use of coal cars by speculators for the storage of coal for speculative purposes, and that the practice of reconsignment is wasteful and a cause of delay and market manipulation.

The Commission finds that coal is not sent to the point of consumption by the most direct route, and that coal cars are being used for transportation of many other sorts of product.

The undue price at which coal can be speculatively sold has resulted in the opening up of temporary and inefficient bituminous mines, called in the industry "snowbirds" or "wagon mines." These temporary and uneconomical mines now secure part of the inadequate number of cars allotted by the railroads to the coal industry. They have none of the usual loading facilities, and the cars are often held at such mines days in the process of loading when a properly equipped mine could load them in a few minutes. The operation of such mines curtails production and is an economic waste at this time.

Experience has shown that in the United States the normal balance in transportation which brings about a maximum of production with maximum economy occurs when out of every 100 tons of originating freight approximately 56 tons are unmanufactured mineral products and 44 are manufactured products, foodstuffs, and other commodities, and when of the 56 tons of mineral products 35 tons are coal. Of these 35 tons of coal the railroads themselves consume about 12 tons.

The present balance of transportation is a great reduction in the proportion of the cars furnished for the transportation of coal. The railroads, however, are consuming their full quota of coal, so that while under favorable and natural conditions 35 tons of coal would be moved, out of each 100 tons of freight, there is now being moved very much less coal. The entire coal shortage is thrown upon the industries of the country and the domestic users, who, instead of having a coal supply equal to two-thirds of the total coal movement, are reduced to a small and continually diminishing ratio, and this in a time when every effort is being made to stimulate the industrial effectiveness of the Nation.

The Commission believes that the coal industry is paralyzing the industries of the country, and that the coal industry itself is paralyzed by the failure of transportation.

The coal problem can not be worked out so long as the railroads are permitted to divide and allot traffic; to lay embargoes without regard to their immediate effect upon industry or upon the systematic distribution of coal; to give priority to the movement of high freight-rate commodities, and to use the device of "long haul."

During the spring and summer months there should be building up in those parts of the country most remote from the coal-producing States stocks of fuel in the hands of industrial consumers, in the hands of State institutions, of public-service corporations, and domestic consumers. This storage is not now taking place, but it must be made during what remains of the summer unless the country is to face next winter a most serious and, unless immediately corrected, an irreparable situation.

Whatever remedy may be applied it should be applied as immediately as possible, for time is passing and no human power can supply the factor of time lost. Time is necessary to build up the stores of fuel in distant points, and that storage should begin without the unnecessary loss of an hour.

The situation in New England is made acute because of the disruption and disorganization of barge transportation. The cost of the water haul from New York to Boston has been increased from 50 cents a ton to as high as \$3 a ton. From Newport News bituminous coal is paying \$3.50 to \$4 per net ton instead of the normal of 70 to 90 cents to New England.

On the Great Lakes it was the custom for ships which carried grain and ore down the Lakes to carry cargoes of coal up to the Northwest. During the summer of 1916 many ships which brought down ore and wheat went up the Lakes in water ballast, taking no coal. Thus they made three round trips earning high rates on freight one way during the same time that would have been consumed in making two round trips carrying cargoes both ways. This practice was pronounced in the late summer and autumn of 1916, and the result was so serious that when navigation opened this spring the Northwest was facing an actual coal famine. This evil condition has already begun this year, and if persisted in the coal famine which threatened that part of the country in the winter of 1916-17 will be an actual coal famine in the winter of 1917-18.

The serious condition as to anthracite at the present time is not a matter of production. It is rather the fact that anthracite at the present moment is being diverted from its ordinary use and storage to compete with and take the place of bituminous coal and coke in the industries. Frequent embargoes also disorganize well-laid plans for prudent distribution and encourage the diversion of the anthracite from its proper and normal channels.

The serious conditions with respect to bituminous coal are unnecessarily curtailed production and a wildly fluctuating market in which speculation feeds upon panic.

The serious aspect as to the country at large is the immediate and intolerable hardship laid upon industry and transferred in large

part to the public in increased prices and the future hardship which will fall upon the domestic consumers next winter.

All sorts of processes of manufacture are now struggling under the costs which they are compelled to pay for fuel. They are in the open market bidding for a share in an inadequate supply of fuel. That supply is inadequate because it is unnecessarily limited by transportation conditions. The prices of coal to railroads and other large consumers have generally increased from 100 to 150 per cent, while prices to small consumers have often increased as much as 200 to 400 per cent, and in some cases even more. Since coal enters into practically every manufactured product, these abnormal prices serve to fix a false basis for the price structure in every industry. The high prices and uncertainty as to coal supply are embodied in contracts and prices for substantially everything, and are a prime cause for the inflation which is so rapidly growing into a national menace.

The public-service corporations of the country are in perhaps the most critical condition of any class of coal consumers, except the general public.

The increased fuel cost in secondary manufacturing processes and in commerce can be and is passed on to the consuming public in the form of higher prices. The prices are not only raised to meet present unheard-of fuel prices, but in contracts for future delivery a factor of safety is put in to cover further expected speculative increases in fuel prices.

The municipal public-service corporations, on the other hand, generally have their rates fixed by their franchises or by law, and fuel is the largest factor in their cost of operation. Already applications are being made to municipalities and State utilities commissions asking for increased traction fares and for increased rates for electric current and for gas. If these increases are granted it means that another item of this tremendous cost will be passed on to the public. If these increases are not granted, then many municipal public-service corporations whose present rates are based on a fair rate in relation to their investment will be crushed under the unjust burden.

The steam railroads themselves are basing their arguments for a 15 per cent increase in freight rates in large part upon the increased cost of their fuel, and any increase, if granted, will be passed on to the public.

The Commission has been appealed to by State institutions whose custom it is to make contracts for the winter's fuel in the early summer. Some report that they can not even secure bids at this time. Wise provision for the wards of the States is impossible.

Our predecessors in this world war have had to solve the fuel problem which lies at the base of every military and industrial activity.

They have tried various experiments and their failures and successes may well guide us in our search for a solution. In England the Government took complete control of the coal mines after less radical methods of regulation failed. The French Government has divided France into three coal zones in order to equalize distribution, and the Government becomes the sole vendor. On May 2, 1917, the Russian Provisional Government took over all the coal mines of that country with a view to control coal distribution and prices. Soon after the outbreak of the war Germany took measures to still further centralize and control the whole coal industry of the Empire under Government administration. The Italian Government imports all the coal brought into the country and acts as a clearing house for its distribution.

All the nations at war have relieved coal miners from military duty, urging that their greatest service to the State can be performed by remaining at their regular employment. Already in this country the ranks of the miners are being seriously depleted by enlistment.

Many remedies have been urged upon the Commission. Government ownership or at least Government operation is argued by many, but perhaps the most common is the suggestion that the Government fix prices at the mines. This suggestion has been carefully considered and it seems clear that unless a uniform price is fixed each ton of coal will have to be followed through to the consumer lest any given ton be retailed at a price based upon the price fixed for the highest cost mine.

If a uniform price were fixed many mines will be shut down unless the price is high enough to make the highest cost mine profitable. Such a price, in operation, might be found unfair as to the public and especially as to the railroads. No remedy will be effective that does not include constant employment to labor and at fair wages; maximum production of all equipped mines; fair profits to all mine owners; and prompt, equitable, and economical distribution to all consumers, both domestic and industrial.

If inefficient mines are closed, so releasing miners to fill the gaps in the ranks of the fully equipped collieries, this shortage can be repaired. It should not be permitted to again become a serious menace to maximum production.

It would seem that steady employment, fair compensation to labor and capital, equitable distribution, and stable prices could be secured by pooling all coal and coke production in the hands of the Government.

If the producer at each mine were paid his full cost of production with allowance for depletion, maintenance, upkeep, and all the usual items, and to this were added a fixed and uniform net profit per ton, with due regard to quality, the coal thus produced at widely

varying costs, if pooled, could be sold through the Government at an average and uniform price, quality considered, which would be entirely tolerable to the consuming public, and a price much lower than could be fixed if an effort were made to fix a uniform price to the producer.

Such a method would require careful supervision as to economical operation, but this task and the expense involved in performing it will be very small in proportion to the net saving gained to the Nation. As a matter of practice, many large contracts are being made on a basis of cost of production plus an agreed profit.

The pooling of coal in the hands of a Government agency would still be ineffective either as to distribution or as to the promotion of a maximum of production unless similar control extended over all means of transportation, both rail and water, and to meet this the pooling of railroads and boat lines is clearly indicated. The railroads of the country, if operated as a unit and on Government account, could be used to transport coal and other products by the most direct route to their point of destination, and the efficiency of the roads themselves, and of existing rolling stock and of motive power would be vastly increased.

Our allies and Germany all require the railroads not already Government-owned to be operated as a unit and on Government account, and the allies have officially stated that one reason for being certain of victory was that transportation had been reorganized and perfected.

For the purpose of operation the several railroad lines and systems and inland and coastwise water transportation of the United States would, under the plan here suggested, lose their identity and could be coordinated into a unit for efficiency and economy.

All receipts from all rail and water transportation agencies being pooled in the hands of the Government, and all expense of operation paid from the common fund, each individual company should be paid a just compensation which might be measured by the average annual net profit and expenditure for maintenance and betterments for the five-year period prior to the war.

The operation both of the mines and of the transportation agencies could be carried on by the present employees and officials, and after the war they could be returned unimpaired to private operation.

The rolling stock of railroads, operated as a unit, could be mobilized so as to care for the shifting seasonal demands.

In view of the foregoing the Commission recommends:

First. That the production and distribution of coal and coke be conducted through a pool in the hands of a Government agency; that the producers of various grades of fuel be paid their full cost of pro-

duction plus a uniform profit per ton (with due allowance for quality of product and efficiency of service).

Second. That the transportation agencies of the United States, both rail and water, be similarly pooled and operated on Government account, under the direction of the President, and that all such means of transportation be operated as a unit, the owning corporations being paid a just and fair compensation which would cover normal net profit, upkeep, and betterments.

In this report the Commission has not gone into the fullest of detail as to its accumulation of data and testimony. Considerable data, however, are added hereto. The Commission has a great amount of other material which has already been correlated, and a vast amount is in hand which quickly can be brought into form. More is being gathered every day, and as it has come in it is cumulative and supports the data already in hand and the recommendations made herewith.

The Commission desires to call to the attention of Congress that this information and the services of the Commission and its experts are available to the committees of Congress for detailed amplification.

JOSEPH E. DAVIES.

WILLIAM B. COLVER.

JOHN F. FORT.

JUNE 19, 1917.

I concur as to the findings of fact in the report, and also in the recommendation that the production and distribution of coal and coke be conducted through a pool in the hands of a governmental agency.

I concur with the view that even the above would be ineffective unless Government control extended over all means of transportation of coal and coke; but I can not concur with the view that this should be brought about by pooling all transportation agencies in the United States, both rail and water, on Government account, "the owning corporations being paid a just and fair compensation, which would cover normal net profit, upkeep, and betterments." The adjustment of claims for "upkeep and betterments," besides compensation for the use of the property during the war, would be so difficult and such a tremendous task that this plan should be adopted only as a last resort, and before it is given a trial I recommend that during the war the President be authorized to order rail and water transportation agencies to give preference to shipment of coal, coke, and other commodities in the order of their importance to the public welfare.

Under the act of Congress approved August 29, 1916, the President, in time of war, is empowered, through the Secretary of War, to take possession and assume control of any system or systems of transportation, or any part thereof, and to utilize the same, to the exclusion as far as may be necessary of all other traffic thereon, for the transfer or transportation of troops, war material and equipment, or for such other purposes connected with the emergency as may be needful or desirable.

WM. J. HARRIS, *Chairman.*

JUNE 19, 1917.

REPORT ON
ANTHRACITE AND BITUMINOUS
COAL SITUATION

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REPORT ON ANTHRACITE AND BITUMINOUS COAL SITUATION.

SUMMARY.

This summary gives the principal facts required in answer to Senator Calder's resolution as to anthracite coal, adopted by the Senate April 30, 1917 (S. Res. 51, 65th Cong., 1st sess.), and in answer to Senator Hitchcock's resolution adopted June 22, 1916 (S. Res. 217, 64th Cong., 1st sess.).

The present conditions in the anthracite industry and the outlook for anthracite; the impossibility of solving the anthracite problem without action by Congress that will at the same time cure the present evil conditions in the bituminous industry and in transportation; anthracite royalties; the panic conditions and prices in the anthracite trade last fall and winter; the response to the question of the justification of the price increases in May, 1916, in relation to the wage agreement of that date; and the bituminous coal situation—these are the principal subjects discussed.

PRESENT CONDITIONS AND THE OUTLOOK FOR ANTHRACITE.

RESPONSE TO SENATOR CALDER'S RESOLUTION.

The present report and the interim report to the Senate under date of May 4, 1917 (S. Doc. No. 19), contain the pertinent information on the anthracite industry thus far obtained and digested by the Commission, including data on the quantity of anthracite produced in 1916 and probable output for 1917. Information is also given on the cost of production by the larger companies and certain of the smaller companies in 1916. In so far these reports answer in part Senator Calder's resolution (S. Res. 51) of April 30, 1917, but full answer of the resolution will require further investigation, particularly as to the disposition of the coal output.

TEMPORARY EXPEDIENTS OF THE COMMISSION FOR SECURING MOD- ERATION OF ANTHRACITE PRICES.

For the protection of the anthracite-using public in the coming winter it is necessary that there should be now a large production and a rapid distribution of domestic sizes of anthracite coal at reasonable prices. Now that the country is at war, it is coming to be recognized by many in the trade that the private consumer of anthra-

cite should be assured a fair distribution of the supply and at prices which will yield only a reasonable return for the various services performed in its production and distribution.

The Federal Trade Commission, cooperating with the trade to make this sentiment effective, has been doing all that it can, with limited powers, toward securing these results. Beginning in May, the Commission is requiring weekly from anthracite operators whose prices were not already voluntarily stabilized at moderate levels a statement of the prices at which they are accepting orders. As a temporary expedient to secure moderation of prices, it has given the trade to understand what it regarded as reasonable maximum limits for coal at the mines under present circumstances.

It was claimed by many of the independent operators that they can not successfully carry on production on the basis of the prices at which the railroad coal companies are able to sell; and that, therefore, while they sell much of their coal at or near the prices of the large companies, the remainder, their "free" coal, must be sold at somewhat higher prices in order that they may make a reasonable profit on the average of their entire business. With this attitude of the smaller operators in view and with the idea of not curtailing the supply which the public needs to have these operators furnish, the Commission suggested to the trade that it was not unreasonable for companies so placed to charge a differential on part of their coal of from 50 cents to 75 cents a ton above the stable prices of the larger companies.

Under this temporary plan any producers who are charging prices in excess of these very generous limits suggested by the Commission are now being subjected to special investigation as to their cost of production, and the Commission has announced its intention to report publicly by name to the Senate any producers making prices that are unreasonable on the basis of their costs.

It is generally recognized in the jobbing trade that the normal margin on which jobbers have transacted their anthracite business is from 10 cents to 15 cents a ton for the eastern concerns and perhaps 25 cents a ton for the western concerns. The Commission believed, and the jobbers generally have concurred, that a maximum margin of 20 cents for the eastern companies and possibly 30 cents for the western companies would take care of all reasonable costs and reasonable profits in the jobbing business under present conditions; that such margins were, in fact, generous, and that much of the business was being done on smaller margins than these. The Commission, therefore, as a further expedient, has required all jobbers to report weekly their sales of anthracite, with full details of the purchase and sales price, from whom and to whom sold, etc. The trade has been given to understand that the Commission will make public by name in special reports to the Senate any jobbers who charge unreasonable profits for their services or who unduly increase the number of handlers of coal between the mines and the consumer by interbuying and interselling between jobbers.

As the result of these activities, supported and approved by many of the operators and jobbers, the very high premiums for domestic sizes of anthracite which obtained in April and May have largely been eliminated from the market.

To secure to household consumers the benefit of lowered wholesale prices, it was obvious that the many thousands of retail coal dealers would have to be reached in some effective manner. This the Commission, with its limited powers and limited means, could not hope to do on any wide scale. It has, however, sent agents to many cities, and by correspondence is seeking information from hundreds of dealers against whom complaints of high prices have been received. In this work it is securing the comparative tonnage of anthracite received this year and last, the cost of the coal delivered at the dealer's yard, and the asking prices.

While this system, if extended widely enough, will give pertinent information, the Commission believes that the achievement of real relief to the consumer should not be left to the precarious outcome of mere powers of investigation and publicity. However, pending legislation by Congress, the Commission will vigorously continue its work along these lines.

INTERDEPENDENCE OF ANTHRACITE AND BITUMINOUS INDUSTRIES.

The Commission's detailed investigation of anthracite conditions had progressed further than its investigation of bituminous, which it was also engaged upon, with the result that it was in a position to undertake effective work on anthracite prices as described above before its bituminous investigation was finished.

It found, however, that no effective check could justly or practically be placed on the steam sizes of anthracite coal so long as the price of bituminous was going to the exorbitant heights that have obtained in the markets since last fall. The steam sizes of anthracite are used for the production of steam and are substitutes for and in competition with bituminous coal. When bituminous coal prices are low the steam sizes of anthracite must be sold at competitive prices. For years the prices received for anthracite steam sizes have not been sufficient to pay the cost of production, so that the loss on these sizes had to be covered by higher prices on the domestic sizes. Now that bituminous prices are extraordinarily high, the steam sizes of anthracite have gone up, though to a less marked extent, in sympathy with them.

As a consequence of this fundamental economic situation, the Commission found that while it could do something toward bringing the wholesale prices of domestic sizes of anthracite to moderate levels, it could not help the steam size situation so long as speculative rules in the bituminous industry. This is a much more extensive problem and one which affects not only domestic users of coal in large areas of the country but also the whole fabric of industrial production.

The problems of anthracite and bituminous are essentially identical; one can not be handled successfully without the other. Because of this the Commission finds that the results obtained as to wholesale prices of domestic sizes of anthracite are being minimized by the fact that anthracite of these sizes is being used to do the work of coke and bituminous coal in industries which have hitherto never used anthracite, but which are now turning to it because bituminous is higher. Egg and pea coal are thus being sold to industrial plants in abnormal quantities.

Moreover, the proportion of domestic sizes produced has fallen off very sharply in May—the month of the Commission's activity in curbing the price of these sizes—as compared with the previous months of 1917. Domestic sizes (egg, stove, nut, pea) in May formed but 61 per cent of the total, as against 66.3 per cent in January–April. In the case of the railroad coal companies these percentages were 61.6 and 65.5, respectively. In the case of the independent operators, domestic sizes fell from 69 per cent in January–April to only 59.2 per cent in May. This appears to indicate that the forcing down of the price of domestic sizes has resulted in a crushing of these sizes at the breaker to supply steam sizes.

The increase of 1,630,000 tons in May, 1917, over April, 1917, did not help the domestic supply as much as it should, because only 48.8 per cent of the increase was in domestic sizes instead of the normal 66.3 per cent.

All these things tend to neutralize the efforts of the Commission to protect household consumers of anthracite in the United States, and show the impossibility of handling the anthracite coal situation separately from the bituminous.

DEPENDENCE OF BOTH ANTHRACITE AND BITUMINOUS ON TRANSPORTATION.

It is one matter to secure sufficient anthracite at reasonable wholesale prices and another matter to secure prompt transportation of the coal to its place of use.

For coal going to the Northwest by way of the Great Lakes, where the open season of navigation determines the quantity of coal that can be placed in storage at the head of the Lakes for the coming winter, prompt transportation is most important. The same is true for New England, whose coal must be brought in and stored during the season most favorable for transportation both by barge from New York and Philadelphia and also by the all-rail routes. If these transportation facilities are not utilized to full capacity during the next few months, serious shortages of coal are almost certain in the New England States and the Northwest.

While partial relief is being afforded by the pooling of bituminous shipments under the auspices of the coal-production committee, and while similar measures are under consideration for facilitating New England water shipments of coal, the transportation problem is much larger than this.

In the anthracite industry, where the initial anthracite railroads are identified or affiliated with the larger mining companies, the transportation difficulties are less serious than in the bituminous industry. With minor exceptions, the car supply for the production of coal at the anthracite mines seems adequate. Even in anthracite, however, the frequent embargoes on shipments all-rail to New England have hampered a normal distribution of tonnage through the rail gateways to that territory. Moreover, whatever acceleration may be secured in the water movement of anthracite, the present exorbitant barge rates, which are more than three times the normal, still remain to be remedied.

In bituminous the transportation situation is absolutely fundamental, since the inadequate supply of cars to the bituminous mines

is the prime factor in cutting down the production of coal. The effect of inadequate car supply in producing a shortage of labor is clear, since mines which are furnished cars sufficient only for three or four days of work a week can not hope to keep their labor force when other industries will employ the men six days a week at the same or much more attractive wages.

It therefore develops that anthracite coal, bituminous coal, and the transportation of anthracite coal and bituminous coal form one great problem, and must be attacked as one, if the solution is to be found. For this reason the recommendations of the Commission in this report go to the whole question.

THE PROSPECTIVE SUPPLY OF ANTHRACITE FOR 1917.

Currency has been given to various allegations of a shortage of 12,000,000 to 15,000,000 tons in the supply of anthracite that is said to be required to meet the coming year's demand.

It is a common practice among dealers in all lines of trade to circulate reports of shortages in supply in order to stimulate demand and increase business. But it is particularly unfortunate in the present time of national crisis for dealers or the press, even with the best of intentions, to give currency to such reports which can not be substantiated.

A similar cry of shortage was made last fall, with disastrous results to the public. As a matter of fact, the public demand last year was unwarranted by any material shortage of supply. Practically all the demand for anthracite was met in the course of the year, and would probably have been met as needed and without great increase in prices if the panic fear of the public had not been played on and used by the trade.

The only condition resulting from the past which affects the future supply is the lessened stocks. According to reports from all companies having any considerable storage facilities, stocks in hands of anthracite producers on April 1, the beginning of the coal year, have been as follows:

Apr. 1—	Stocks (gross tons).
1913.....	3, 891, 711
1914.....	5, 223, 844
1915.....	7, 406, 502
1916.....	4, 585, 906
1917.....	894, 347

The above shows that stocks on hand at the beginning of the past coal year (April, 1916) were about normal and that stocks on hand April 1, 1917, indicated a reduction during the year of 3,691,559 tons.

This 3,691,559 tons represents the handicap with which the present coal year starts. There is little question that the production during the year can be increased sufficiently to offset the lessened stock at the beginning.

The present spring has been an abnormally late one and has undoubtedly resulted in the consumption of a considerable tonnage that normally would have gone into stock. But the extraordinary demand in April and May of this year can be explained only in part by the late spring, and it is the better opinion, held by many of the best informed men in the trade, that there is at present in cellars of consumers a much greater tonnage than has heretofore been the rule.

Commercial production of anthracite for the past four coal years was as follows, based on statistics compiled by the Anthracite Bureau of Information:

	Gross tons.
Apr. 1, 1913, to Mar. 31, 1914.....	66,680,768
Apr. 1, 1914, to Mar. 31, 1915.....	68,139,522
Apr. 1, 1915, to Mar. 31, 1916.....	71,332,976
Average for three years.....	68,717,755
Apr. 1, 1916, to Mar. 31, 1917.....	67,776,589

These figures show that during the past coal year production was 3,556,387 tons less than the preceding year (when production was abnormally high), and 941,166 tons less than the average of the three preceding years. The unusual production of the year ending April 1, 1916, resulted from the abnormal quantity mined in anticipation of possible trouble in the adjustment of the miners' wage scale a year ago.

Disregarding exports and local sales to miners, neither of which materially affected conditions, the marketed tonnage by coal years was as follows:

Year ending—	Production.	Taken from stock.	Added to stock.	Marketed tonnage.
Mar. 31, 1914.....	66,680,768	.....	1,332,133	65,348,635
Mar. 31, 1915.....	68,139,522	.....	2,182,658	65,956,864
Mar. 31, 1916.....	71,332,976	2,820,596	.....	74,153,572
Mar. 31, 1917.....	67,776,589	3,691,559	.....	71,468,148

The above shows that during the past coal year the marketed tonnage was only 2,685,424 less than the abnormal year preceding and was over 5,000,000 tons more than 1913-14 and 1914-15.

The Commission's statement that it expects an increased output sufficient to meet the demand for anthracite is based on the authoritative figures it has collected on stocks of producers and upon assurances from leading anthracite operators and representatives of the United Mine Workers of America that this will be a year of unusually large production. One of the very large operators stated that during 1917 his company alone expected to produce 2,000,000 tons more than last year.

The gravest problem will be to prevent the diversion of anthracite tonnage from normal use to take the place of unreasonably high-priced bituminous coal and coke.

Bearing upon the supply, statistics are available for the first five months of 1917, and a comparison of these figures with those of preceding years is significant, especially when taken in connection with assurances given for the future months of 1917. The following statement of commercial production is compiled from statistics collected by the Anthracite Bureau of Information:

Month.	Average for years 1914-1916.	1916	1917	1917 against average of 1914-1916.	1917 against 1916.
	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.
January.....	5,297,894	5,884,350	5,940,725	+ 642,831	+ 56,375
February.....	4,722,557	5,696,306	5,178,432	+ 455,875	- 517,874
March.....	5,455,782	6,127,351	6,989,075	+1,533,293	+ 861,724
April.....	5,752,191	4,528,784	5,592,299	- 159,892	+1,063,515
May.....	5,928,133	5,547,899	6,917,525	+ 989,392	+1,369,626
Total.....	27,156,557	27,784,690	30,618,056	+3,461,499	+2,833,366

The important figures in the above statement are the 2,833,366 tons increase in the five-month period of 1917 over the same period of 1916, and the 3,461,499 tons increase in the five months of 1917 over the average of the five months for the three years 1914-1916.

The coal year, beginning with April 1, 1917, is the real period to consider with reference to this year's supply. April, 1917, shows an increase over April, 1916, of 1,063,515 tons. May shows the remarkable increase of 1,369,626 tons. April and May, the first two months of the new coal year, show an increase of 2,433,141 tons, or 24 per cent, over the corresponding months of 1916.

These increases for January to May, it should be remembered, are increases beyond a 1916 period of abnormally high production and indicate that the present year's output will be unprecedented.

The great essential to the realization of this production is the recognition by the Government that men engaged in mining and mine clerks should be exempt from military service.

The increase in demand, so far as it is real, has arisen from the diversion of domestic anthracite to industrial use in competition with bituminous and coke, and from the natural increase in consumption due to the gradually increasing population. The tendency of population toward apartment houses in which steam sizes are used offsets to a degree the effect of increased population. Enactments by Congress of legislation that will lead to relief from the bituminous situation will remove much of the abnormal demand for domestic sizes of anthracite for industrial use and help restore the anthracite trade to the ordinary channels.

There has undoubtedly been an immense artificial demand for anthracite this spring. Thousands of householders who normally do not buy till fall have this year poured in their orders in April and May.

A fair consideration of all the factors here mentioned, noting in particular the very great increase in production already shown by the first two months of the new coal year, together with the prospect of such continued increase and the indication of unusual quantities in storage by consumers, contradicts reports of any prospective shortage of anthracite, provided the bituminous and coke production is increased sufficiently to take care of the demands properly belonging to those fuels, thus conserving anthracite for its normal uses.

NECESSITY OF NEW LEGISLATION.

The Commission's consideration of the whole problem leaves it face to face with the conclusion that the results thus far obtained in the moderation of wholesale prices of domestic anthracite can not be held, much less carried through the retail dealer to the consuming public, unless Congress promptly takes far-reaching action. What can not be accomplished in the anthracite industry with present limited powers certainly can not be accomplished in the bituminous industry which is much more extensive, and in which transportation is so vital.

BRITISH GOVERNMENT'S CONTROL OF COAL MINES.

In this connection a statement of the methods of the British Government in handling the coal problem in war time is pertinent.

For some three months the British Government has controlled all the coal mines in the United Kingdom.

The owners operate the mines. All dividends paid to stockholders of mining companies and other distribution of profits must be approved by the Government.

All wage agreements entered into between operators and mine workers must be approved by the Government. In the Welsh mines wage scales have been adjusted principally with regard to the selling prices of coal, and to some extent with regard to the cost of food and living expenses. In the northern fields, wage agreements have been principally adjusted with respect to the cost of food and living expenses. The cost of food and other necessities of living has advanced 94 per cent since the war began.

To arrive at a maximum or "limitation" price for coal, to the average prices for coal which were received by any producing company for its fiscal year ending either December 31, 1913, or June 30, 1914, has been added 4 shillings (about \$1) per ton. No advances in these prices can be made unless the advances are approved by the board of trade. Since the first "limitation" prices were made effective, the board of trade has authorized one advance, amounting to 2 shillings 6 pence (about 60 cents), per ton. "Limitation" prices are confined to consumption within the British Isles, or domestic consumption. The Admiralty is paying at present 24 shillings per gross ton, which is an advance of 4 shillings per ton above the pre-war prices.

Army requirements, navy requirements, and all other Government industries, including munition plants and railroads, are given priority in the distribution of coal and in the allotment of coal cars. The railroads are still receiving the best grades of coal, and it is being supplied largely by mines which formerly supplied it to them.

In order to arrive at the basis for war taxes or excess profit taxes, each producer of coal was permitted to report profits for any two of the three calendar years, 1911, 1912, or 1913. The profits for the two years selected were added together and divided by 2. The result so obtained has been deducted for the profits of each coal producer for each year during the war, and any profit earned over and above the figure so arrived at is subject to a 50 per cent excess profit tax. The years 1912 and 1913 were the two most profitable years in the history of the British coal industry.

When the war began there were about 1,000,000 mine workers in England. Two hundred and forty thousand of them promptly enlisted. Production of coal became so curtailed that the Government tried to return some of the enlisted men to the mines, but only between 15,000 and 20,000 men were sent back. No mine worker in Great Britain can now enlist in the Army or Navy unless his enlistment is certified to by local tribunals which have been formed in each district. These tribunals are composed of mine workers, operators, and Government officials. When it became known that mine workers would not be enlisted, men employed in other trades, in stores, and in various other occupations sought employment in the mines. This class of men has been largely drafted into the Army and Navy through the district tribunals.

REGULATION OF PRODUCTION AND DISTRIBUTION OF COAL IN GERMANY
DURING THE WAR.

The syndicate agreement of the Rhenish-Westphalian Coal Syndicate, one of the largest and most powerful combines in Germany, expired on November 30, 1915.

For many months prior to this date, conferences were being held by the members of the syndicate for the purpose of renewing the syndicate agreement without, however, reaching any satisfactory result. Certain large interests held out, it is alleged, because they expected a big boom in the coal industry after the close of the war, and wanted more leeway than they could have under a syndicate agreement which would allot the output and fix prices.

Fearing that the dissolution of the coal syndicate would result in high prices and would seriously affect economic conditions, the Imperial Federal Council on July 12, 1915, issued a decree which provided that—

Unless up to September 15, 1915, at least a temporary agreement be made which is to run till the end of March, 1917, the Landeszentralbehörden (State central authorities) shall combine the owners of coal and lignite mines into compulsory producing and distributing companies. Prices are to be fixed by the general meeting of the members. A Government commissioner is to be a member of these compulsory combines with certain veto rights.

As a result of this action of the Government all the recalcitrant mine owners immediately agreed to a renewal of the Rhenish-Westphalian Coal Syndicate and a new agreement was made to run till March 31, 1917.

The above decree of July 12, 1915, was amended on August 30, 1915 (see Reichsgesetzblatt, 1915, No. 113, p. 535 fol.), and provides in substance as follows:

ARTICLE I. The imperial chancellor is authorized to combine the owners of coal and lignite mines, generally, for certain districts or for certain kinds of mining products, without their consent, into companies, whose duty it shall be to regulate the production and distribution of the mining produce of the members.

SEC. 5. Prices shall be fixed by the assembly of members. The first scale of fixed prices requires the sanction of the imperial chancellor, who is authorized to reduce the prices agreed upon. Motions to increase the fixed selling prices require the acquiescence of more than 70 per cent of all votes. In case motions to reduce the fixed selling prices are voted down, there being a minority vote of 30 per cent of all votes, the imperial chancellor decides whether the prices shall be reduced.

SEC. 6. Government-owned mines are not subject to these regulations regarding quantities and prices.

SEC. 7. The imperial chancellor has supervision of the company. He is authorized to be represented by a proxy at the meetings of the company who has an advisory vote.

The proxy has the right to object to resolutions in violation of the laws, by-laws, or public interest. The imperial chancellor decides whether such objections are justified. In case resolutions are objected to as being contrary to the public interest, the imperial chancellor, prior to giving a decision, shall consult with an advisory committee of representatives of the mine owners, miners, coal trade, industry, agriculture, and railroads.

SEC. 8. Whoever, contrary to the provisions of this decree does not turn over mining products to the company shall be punished by a fine up to 100,000 marks.

ART. III. The imperial chancellor shall not place Article I of this decree into execution in case more than 97 per cent of the mine owners combine within a period to be determined by the imperial chancellor.

ART. VI. This decree ceases to operate two years after conclusions of peace.

ANTHRACITE ROYALTIES.

The matter of royalties charged by landowners to anthracite operators is already serious and is growing more so.

Leases are frequently made upon a sliding scale so that whenever there are increases in sale price, even if forced by increase in such operating expense as labor and supplies, the landlord exacts an increased royalty per ton. In other words, his gains increase with the tenant's expense.

At each expiration of a lease efforts are made to exact an increased royalty and as the operator has large investment which would be substantially lost if he were to lose his tenancy, he is forced to submit.

These heavy exactions levy hundreds of millions of dollars upon operators and are by them transferred to the public. The landlord performs no service whatever. He possesses a natural resource and as growing population makes demand more pressing he increases his levy upon the public.

Whether the system had a foundation in justice and equity or not, it is certain that it has now reached a point of development that makes it a public hardship and a burden upon both miner and mine operator as well as upon the consuming public.

The Commission believes that this is a matter worthy of the most careful study.

PRICES AND GROSS MARGINS OF PROFIT IN THE ANTHRACITE INDUSTRY IN THE FALL AND WINTER OF 1916-17.

The inquiry into prices and gross margins of profit of producers, jobbers, and retailers of anthracite during the unusual market conditions in the fall and winter of 1916-17 was undertaken by the Commission on its own initiative. Following the spirit of the Hitchcock resolution, it covered the extremely high prices that developed subsequent to the adoption of that resolution. The results of the inquiry also serve to answer, in part, Senator Calder's resolution of April 30, 1917. The questions considered are the causes of the high prices and the extent to which producers, wholesalers, and retailers took advantage of panic conditions to unreasonably increase their gross margins.

GENERAL CONDITIONS OF SUPPLY AND DEMAND.

The commercial production of anthracite for the past coal year—i. e., April 1, 1916, to March 31, 1917—was 67,776,589 gross tons, or about 5 per cent less than the very large production of the year before, and $1\frac{1}{2}$ per cent less than the average of the three past years. Though small in proportion, this shortage had marked effects.

Authoritative labor statistics were secured for the first nine months of this period (April to December, 1916) for the railroad coal companies and seven independents, and may be regarded as representative of the whole industry. These statistics indicate the drawing off of some 13 per cent of the total labor supply from the mines. The loss in miners' laborers alone, who went largely to industries paying higher wages, particularly to munition factories, reached from 26 per cent for the railroad coal companies to 38 per cent for the seven inde-

pendents. In spite of this and of some shortage of cars, the commercial production of the anthracite field for the nine months fell off only 8 per cent, and for the full coal year, as stated it fell off only 5 per cent. (For the calendar year 1916 complete statistics, courteously furnished in advance by the Pennsylvania State Department of Mines, covering all companies in the field, indicate a decrease of 10.1 per cent in all labor and of 23.7 per cent in miners' laborers; and a decrease of 2.3 per cent in man-days worked. Yet the calendar year commercial production in 1916 fell off only two-thirds of 1 per cent, and the total production, including fuel used at the mines, fell off less than $1\frac{1}{2}$ per cent.)

From these facts it is clear that great credit is due to the miners and to the mining companies. Apparently the remaining labor force, though working only eight hours a day instead of nine, was more efficient and the companies managed their operations so as to produce the maximum possible under the difficulties encountered.

MARKET SHORTAGE ONLY $3\frac{1}{2}$ PER CENT.

Except for the efforts of the miners and the operators and except for the 3,691,000 tons that the railroad coal companies were able to furnish from storage, the supply available for the market would have been seriously short. As it was, for the entire coal year 1916-17 the supply sent to market from the mines and from storage combined was 71,468,000 tons, or only $3\frac{1}{2}$ per cent less than in 1915-16. In fact, it was greater than the average supply marketed for the three preceding coal years by 4 per cent. Conditions of supply, therefore, though accompanied by an increase in real demand, could not alone have produced the acute crisis nor have caused the panic prices that prevailed last fall and winter.

"BUYING PANIC" THE CHIEF CAUSE.

The difficulty lay rather in the local shortages in the consuming markets. Anthracite could not be had at the times, at the places, and in the quantities demanded by the dealers and the public. This market demand, though representing in part an increase in real need for anthracite, was largely the result of artificial and psychological conditions. The precipitation of demand in September and October by the imminence of a nation-wide railroad strike, the inability of the dealers to promptly supply this concentrated demand, and "scare" articles in the newspapers predicting a coal "famine," and "\$12 to \$15 coal," brought on a market crisis more serious than any since the strike of 1902, when there was an actual cessation of mining for four months.

TRAFFIC CONDITIONS AND SHIFTING OF MARKETS.

The congestion of railroad traffic and frequent embargoes resulted in delayed deliveries. In the case of seven representative New England markets reports from 22 dealers selected at random indicate no great delay in transit on the bulk of the tonnage in September to December, 1916, as compared with April to August. On the Boston & Maine road an anthracite embargo was an important

factor in November. Average transit time of anthracite on seven roads from Buffalo to Chicago during November and early December varied from 7 to 15 days. In Detroit reports indicate marked delay; in April to August only 5 per cent of the tonnage covered was in transit over 20 days, but in September to December, 33 per cent took over 20 days. The diversion of coal barges in the New England service and of freight vessels on the Great Lakes to the carriage of more profitable freight threw a still heavier burden on the all-rail routes.

Probably the most serious difficulty occasioned by shifting of markets resulted from the Erie Railroad diverting to the West a large part of the tonnage its subsidiary mining companies normally sold in New York City and New England. This gave the railroad a longer freight haul on the coal. Realizing the serious effect of this policy, these interests, beginning with June, 1917, are to some extent increasing their shipments to eastern territory.

PANIC DEMAND.

All these difficulties embarrassed the distribution of coal, but they could probably have been successfully met in most markets except for the panic demand.

The majority of the dealers investigated in the different markets covered by the Commission's agents received nearly as much or even more anthracite than normally. Dealers who had not stocked large tonnages in the summer found that the artificial demand, intensified in periods of severe weather and local shortage, took the coal almost as fast as it came in.

The panicky condition of the market throughout the fall and winter indicates the fear of the public when it believes its supply of this necessity will fail.

PRICES AND COSTS OF THE RAILROAD COAL COMPANIES.

To some extent the railroad coal companies followed the market upward in this crisis. Their basic circular prices in effect on domestic sizes in September were raised by them during the fall and winter of 1916-17 in certain territories. Beginning in October and November, their circular prices f. o. b. the mine for all-rail shipment to New England were raised 10 cents per gross ton, except by one company. Circular prices for coal alongside Boston Harbor delivered by its own barges were increased by one company in October 45 cents per gross ton on prepared sizes and 60 cents on pea coal. Several other railroad coal companies effected an increase of from 25 to 50 cents per gross ton in prices at Boston Harbor by increasing their barge rates, and one company increased rates by \$1.50 or more, though "company" barge rates were not nearly so high as the rates of independent vessels. The normal "company" rate was formerly about 50 cents per ton, which there is reason to believe may have been below the cost of the barge service rendered.

In December, 1916, or January, 1917, circular prices, delivered f. o. b. cars at Chicago and certain markets in that territory, were increased 25 cents per gross ton on prepared sizes, but these increases are explained as the tardy shifting to the purchaser of a corresponding increase in freight rates which had been borne by the mining companies since July, 1915. In November one company raised its cir-

cular prices f. o. b. cars at Buffalo 25 cents per gross ton on stove coal and 15 cents on chestnut, and another company made the same increases in December.

Some of the railroad coal companies operating wholesale trestles increased their trestle prices in certain markets by 25 cents a ton on all sizes, beginning in November or December, 1916. This increase was alleged to cover a greater loss from degradation due to a greater breaking up of the coal when dumped into empty pockets.

These various increases were small as compared with the premiums charged by many independents and jobbers, but they applied to very large tonnages. On steam sizes, which are commonly not covered by circular, the railroad coal companies advanced prices for the tonnage not under contract.

On domestic sizes no sales were made by the railroad coal companies above the circular prevailing at the time of sale. But by no means all of the railroad coal reached the retailer at circular. Part of it reached him by way of the jobber, and much of this was at premium prices. Some of the railroad coal companies, at a time when they were supplying retail customers with less than normal tonnage, furnished favored jobbers with even more tonnage than in 1915. However, no case was found in which the railroad coal company or its officers shared in the premiums obtained by the jobber, except in one minor instance as to a subordinate officer.

On the whole, the railroad coal companies were a moderating and stabilizing factor in the market.

Their production from April to December, 1916, was within 1 per cent of that for the corresponding period, and throughout the fall and winter they supplied large tonnages from storage.

So far as the price increases above referred to were made before December 31, 1916, they are included in the comparison of costs and sales receipts in the next section of this report in the response to the Hitchcock resolution. It should be stated, however, that a comparison of the costs of nine of the railroad companies (those secured by months) shows that on the average there was no increase of costs in the period September-December, 1916, as compared with April-August, 1916; nor in December, 1916, as compared with September, 1916. Costs were not secured for 1917, but judging from the large tonnage produced up to April 30 of this year, the Commission believes that costs per ton did not increase from January to April.

It may be further noted that the larger coal companies since December 31, 1916, have increased their quoted prices on the steam sizes. These sizes have heretofore been sold at a loss, in competition with bituminous coal, which loss has been covered by high prices for domestic sizes. It is obvious that, if costs remain the same, a reduction for any considerable period in the loss on steam sizes by the realization of higher prices therefor would enable the companies to lower the price of domestic sizes without lowering their profits from the total business.

PRICES AND COSTS OF INDEPENDENT PRODUCERS.

Many of the independent operators took advantage of the crisis to charge exorbitant prices, often increasing their prices \$1, \$3, and in some cases \$5 a ton. Some of the independent producers sold a considerable part of their coal at circular to regular customers, and a

few perhaps sold entirely at circular; but a large part of the independent coal was sold at stiff premiums, and some of the independent producers practically auctioned their coal to the highest bidder, the price changing from day to day and even from hour to hour.

Some instances came to the attention of the Commission in which independent producers arranged to "split" premiums with particular jobbers. The producer sold to the jobber at circular prices, allowing him a commission, and then received from the jobber half of all premiums secured by him. Such arrangements appear to have been intended to supply the jobber with a larger and more profitable tonnage to sell, in return for his finding the highest possible market and sharing the premium.

The records of eight important independent producers, including the two independents covered in the next section of this report, in answer to the Hitchcock resolution, were examined by the Commission for the period from September to December, 1916. For the eight companies a comparison of their average costs accepted as comparable, with their average sales receipts indicates that their margin increased 40 cents per ton during the four months. If all the costs had been accepted as they stood on the books, their margin would still have increased 35 cents.

When formerly the railroad coal companies under the perpetual "65 per cent contracts" purchased the total output of many mines, the coal so purchased was sold at circular, but these contracts having been abrogated by the Supreme Court as in restraint of trade, the coal from these independent mines has often been sold by its producers at high premiums in the recent crisis. In the last four months of 1916 coal purchased by the railroad coal companies from independents under short-time contracts fell off about 300,000 tons, or 38 per cent.

The total production of anthracite by all independent operators in April to December, 1916, fell off 9 per cent as compared with the same months of 1915.

PRICES AND GROSS MARGINS OF JOBBERS.

The speculative transactions of jobbers were the most striking feature of the panic market. As a class they took full advantage of the abnormal demand. Some frankly stated that they were "out to make all the money they could." The majority averaged double or treble their normal gross margins of profit, and a number averaged five or six times the normal margin. In the eastern markets individual sales were frequently made by jobbers at gross margins of \$4 to \$6 a ton, instead of the ordinary eastern margins of 10 cents to 15 cents.

Coal was often sold by one jobber to another. In a random selection of 142 high premium purchases by retailers, 56 were found to have passed through the hands of more than one jobber. A number of these shipments passed through as many as three or four hands, and one through five hands, each jobber generally taking a large profit. Sometimes the same coal went through the same jobber's hands twice.

No doubt, the normal costs of the jobbing business were somewhat increased by prevailing conditions. The credit risk taken by the

jobbers was greater, although in many cases he required the retailer to pay cash in advance. There was risk of direct losses if the market should fall, and some instances of losses as high as \$1.50 per ton were found by the Commission. But giving all due weight to those considerations, it is obvious that the jobbers, with few exceptions, made unreasonable profits out of the necessities and fears of the dealers and the public.

The jobber does not unload or store the coal nor deliver to the dealers' wagons from a storage pocket as a wholesaler or dock company does. He performs no physical service. In a market like the recent one, he is primarily a speculator.

PRICES AND GROSS MARGINS OF RETAIL DEALERS.

Retail dealers who had large stocks of coal purchased in the summer at circular, or who received sufficient current shipments from railroad coal companies, had an opportunity to raise their prices and make large profits. In some cases advantage was taken of this opportunity, while in others it was not. Retailers who were forced to purchase a large proportion of premium coal, or to pay extremely high rates (\$2 to \$3 per gross ton) for transportation of coal in "independent" barges, as in New England, raised their prices; in some cases the increase was unduly large, in others only a corresponding increase was made, while in a few cases the increase was not sufficient to prevent loss. In many instances it appears that losses on certain classes of business, especially on contracts, were offset by increased margins on household sales.

High premium coal, though not a large proportion of the total sales of anthracite, had an undue effect on retail prices. The individual retailer often used the premium prices he paid for part of his coal as a pretext for charging high prices on all his coal. Again, in some communities there was a tendency for all the dealers, those receiving low-priced coal as well as those receiving premium coal, to sell to the consumer at uniform prices high enough to give a profit to the dealer who had been compelled to pay the highest prices for his supply.

PREMIUM COAL.

The total percentage of premium coal—that is, coal purchased at a yard cost price greater than circular price plus normal transportation charges—handled by 52 dealers in New England (not including Boston) amounted to 34 per cent of the total anthracite purchased by these dealers. For six selected cities in other sections of the country the percentage of premium coal handled by the dealers covered was highest for Chicago (24 per cent), Niagara Falls (16 per cent), and New York (12 per cent). For Detroit, Buffalo, and Milwaukee each it was less than 1 per cent.

INCREASES IN COST.

In cities where dealers delivered anthracite in ton lots or less, in order to distribute the current supply fairly among those customers in most immediate need of it, the cost of the additional delivery service involved increased to some extent their normal cost of doing business, but, speaking generally, the price increases more than offset all increases in cost, including labor and supplies.

VARIED INCREASES IN GROSS MARGINS IN DIFFERENT MARKETS.

The Commission secured approximate gross margins from September to December, 1916, on the various classes of business and sizes of coal handled by representative anthracite retailers in various markets, covering from 20 to 75 per cent of the total tonnages handled in those markets.

On the basis of rough averages, the dealers covered in Chicago, and in southeastern Massachusetts and Rhode Island, very largely increased their gross margin during the last four months of 1916, often increasing it by as much as \$1.50 or \$1.75 per net ton over the normal margin; those covered in New York City, Detroit, Niagara Falls, Boston, and in the region from Portland, Me., to Lawrence, Mass., took less marked advantage of the crisis, mostly increasing their margins by not more than 75 cents or \$1 per net ton; those covered in central Massachusetts and Connecticut increased their gross margins only moderately; and the retailers covered in Minneapolis, St. Paul, Milwaukee, and Buffalo did not unduly raise their prices.

No detailed inquiry was made in Philadelphia, Baltimore, and Washington because the normal price levels were not increased to any marked extent in those cities last fall and winter.

On account of high rates on water routes, New England received more coal all-rail in April to December, 1916, than in the same period of 1915, the all-rail tonnage increasing from 3,916,771 to 4,112,214 tons.

QUALITY OF ANTHRACITE.

Many complaints have been received as to the quality of anthracite shipped during the crisis and now being shipped, and apparently the pressure of demand has caused the producing companies to be less strict in enforcing their private standards of quality. The Commission believes that, if feasible, Federal standards of quality maintained under a Federal inspection service would be beneficial to the anthracite producers and to the public and thinks it desirable that the Bureau of Standards and the Bureau of Mines consider the feasibility of a system for maintaining reasonable and practical standards, with a view to recommending any legislation that may be found wise.

SPECIFIC REPLY TO THE HITCHCOCK RESOLUTION REGARDING PRICE INCREASES OF LEADING PRODUCERS OF ANTHRACITE IN 1916.

Replying specifically to Senate resolution 217, Sixty-fourth Congress (Senator Hitchcock), June 22, 1916, which inquired regarding price increases of leading producers of anthracite and particularly whether or not wage increases in May, 1916, justified the subsequent price increases, the Commission reports as follows:

The grounds alleged by operators for the price increases in the early part of 1916 were principally increased cost of labor under the wage agreement, effective April 1, 1916, but also increases in cost of supplies, in expense involved under the Pennsylvania workmen's compensation act, etc. The point to be determined in answer to the Hitchcock resolution is whether the increase in prices was justified by the increase in costs.

Thirteen companies—the only ones having an annual production of 1,000,000 tons or over—were covered in this part of the investigation. These companies produced 79 per cent of the total commercial production of anthracite in 1916. Eleven of them, producing 76 per cent of the annual total, are “railroad coal companies”—i. e., railroad companies directly engaged in mining, or mining companies directly or indirectly controlled by railroads. Two are “independents”—i. e., companies not affiliated with the railroads.

BASIS OF COST COMPARISONS.

The period covered is from 1913 to 1916, affording a comparison of costs under the wage agreements of 1912 and 1916.

In the comparisons the Commission has not used the total costs as shown by the companies' books but only the operating costs and certain items of general expense. Without exhaustive analysis, it felt justified in accepting these costs as comparable for the purpose of answering the Hitchcock resolution. These costs “accepted as comparable” include the most important items cited by the companies as causing higher costs. The Pennsylvania tonnage tax (Dawson Act) was not collected from the operators because of a suit brought by them testing its legality. The tax was declared unconstitutional on May 10, 1917, and will never be paid, though the operators, in substance, charged the tax to their customers. This item has been omitted from the “Costs accepted as comparable.”

The chief items reserved by the Commission for further analysis are the tonnage tax, extraordinary repairs, improvements, stripping, general office expense, and selling expense. The book entries under these items are important in the aggregate, and show some increase as between the two periods. Unusual amounts expended in 1916 by some companies for extraordinary repairs and similar items should apparently be distributed over a period of years instead of being charged against 1916 alone. Such items can not be accepted as they stand for comparison with 1913.

The costs considered are for fresh-mined coal only. The small proportion of “washery” coal, recovered at relatively slight expense from culm banks, is not included in the averages.

The costs per ton are computed on the total fresh-mined tonnage produced by the 13 companies and include coal of all sizes sold by them at the mine during various months from April to December, 1916, at prices ranging from about 20 cents to \$5.20 per gross ton, according to size, the average sales receipts for all sizes f. o. b. the mine being \$3.24 per gross ton.

INCREASE IN COST.

In terms of the average of the 13 companies the increase over 1913 in operating costs and in items of general expense accepted by the Commission as comparable was 28 cents per gross ton. Substantially all of this increase occurred after April, 1916. The average increase in direct labor cost was 15 cents; in supplies, 2 cents; in comparable items of general expense, 11 cents, which includes increases of 4 cents for the workmen's compensation act, 3 cents for taxes other than the tonnage tax, 1 cent for heat, light, and power, 1 cent for royalties, and 2 cents for other items.

In addition to these increases in costs accepted as comparable, the companies' books show a further average increase of 8 cents a ton in the items reserved by the Commission for further analysis, including $2\frac{1}{2}$ cents increase in the tonnage tax. A considerable part of this additional increase was due to unusual expenditures in 1916, the cost of which, as has been pointed out, should apparently be distributed through several years in order to make a proper comparison with 1913.

GREATER INCREASE IN RECEIPTS.

In the period from 1913 to 1916 the actual average sales receipts of the 13 companies f. o. b. the mine increased on the average 46 cents per gross ton, or 18 cents per ton more than the increase in the costs accepted as comparable.

This increase in margin would still have been as high as 10 cents per ton, even if all the costs as they stand on the companies' books, including the reserve for the unpaid tonnage tax, had been accepted as comparable, and would have been as high as $12\frac{1}{2}$ cents if all costs except the tonnage tax had been accepted. A full analysis of all the items, not possible in the time spent on the books, would probably show that the actual increase in margin was as high as 15 cents.

HIGH-COST AND LOW-COST COMPANIES.

The 5 companies whose costs were above the average of the 13 sustained an increase in comparable costs over 1913 which averaged 33 cents; and the 8 who were below the average of the 13 sustained an increase averaging 25 cents. Against these increases in costs accepted as comparable, the increase in average sales receipts for the high-average group was 45 cents per gross ton and for the low-average group 47 cents. The highest-cost company had comparable cost increases amounting to 60 cents, while its average receipts increased 44 cents. This company was not, however, one of the largest. The lowest-cost company had increases in comparable costs amounting to $5\frac{1}{2}$ cents, while its average receipts increased 37 cents.

CONCLUSION IN RESPONSE TO HITCHCOCK RESOLUTION.

Comparing 1913 with April to December, 1916, the average increase in margin of the 13 companies investigated was, as stated, about 15 cents per gross ton. These companies sold 41,780,000 tons of fresh-mined anthracite in the last nine months of 1916 for a total sum of \$135,450,712, on which an increased margin of 15 cents a ton would amount to \$6,267,000.

The increase in prices, as measured by a comparison of the average sales receipts, was not justified by the increase in costs; whether the prices themselves were reasonable or unreasonable, on the basis of the profit they afforded on the investment, remains to be determined by fuller investigation.

It is clear that the increase in labor cost alone did not justify the price increases. The average increase of direct labor cost was only 15 cents a ton, of indirect labor cost (included in general expense) probably not more than 3 cents a ton, making the total average labor cost increase about 18 cents, as against the average increase of 46 cents in sales receipts, though other items brought the increase in costs accepted as comparable up to 28 cents.

VALUATION OF COAL-MINING PROPERTIES.

As regards production, it is difficult to determine the actual cost of the investment of the coal-mining companies. This or any other basis that may be used in judging the reasonableness of prices at the mines requires careful investigation and study. Moreover, the financial affairs of the railroad coal companies and of the railroads that control them have in many cases been intermingled. Substantial control of mining and transportation of anthracite by the same or closely affiliated interests (contended by the Government to be a violation of law) means that a real understanding of the facts can not be reached without an investigation of the costs and profits of production and transportation combined. The Interstate Commerce Commission is engaged in making a valuation of the railroads of the country, including the anthracite roads. A study of the investment and value of the coal properties of the anthracite railroads in connection with the Interstate Commerce Commission's valuation of their railroad properties, and with the full investigation of economic conditions in the mining of anthracite, will furnish the information needed to determine reasonable prices for this commodity at the mines and reasonable rates for its transportation in interstate commerce.

In the distribution of anthracite by the trade a wider range of conditions must be taken into account than in its production and transportation. The fundamental principle, however, is clear. The system of handling from the mines to the consumer should be such as to provide economy of cost, reasonable prices, and in times of shortage a fair distribution of available tonnage. How far these public ends are attained by the trade in normal times and what extent of change may be necessary in order to attain them is a matter for further study and report. Certainly the trade absolutely fails to attain them in times of stress.

BITUMINOUS COAL SITUATION.

For several years prior to 1916 it was a matter of general knowledge that the bituminous coal industry in the United States was in an unsound condition. In this basic industry, so necessary to the industrial life of the country, conditions had developed so that it was demoralized financially, wasteful methods of mining resulted in the permanent loss of millions of tons of coal that could have been saved otherwise, the existing mines through lack of demand were kept idle from one-fourth to one-third of the working time, with consequent hardship to labor.

On August 18, 1916, the House of Representatives passed a resolution (H. Res. 352, 64th Cong.) introduced by Congressman Rainey, which called attention to the foregoing conditions, and directed the Federal Trade Commission to make inquiry into the conditions in the production and distribution of bituminous coal and to report the facts to Congress with recommendations.

RESOLUTION SUBMITTED BY MR. RAINEY AUGUST 18, 1916.

House resolution 352, Sixty-fourth Congress, first session.

Whereas it is alleged that unfair methods of competition are widely practiced in the bituminous coal-mining industry of the United States; and
Whereas it is alleged that in consequence thereof the industry in many districts has been demoralized financially and numerous operating companies have been forced into receiverships; and

Whereas it is also alleged that in consequence thereof some 200,000,000 tons of coal are permanently lost to the Nation each year by unwise and improvident methods of mining; and

Whereas it is further alleged that in consequence thereof some 500,000 employees at the mines are kept idle from one-fourth to one-third of the working time, with much ensuing hardship and loss to themselves and those dependent upon them; and

Whereas such conditions, if existing in the bituminous-coal industry, vitally touch the interests and welfare of the public as a whole: Therefore be it

Resolved, That the Federal Trade Commission be, and is hereby, directed to begin and make inquiry immediately into the conditions in the production and distribution of bituminous coal and to report the facts to Congress with recommendations.

The Commission at once began such inquiry. In view of the work necessitated by inquiries into other industries also directed by Congress, and the limited funds and force available, it has not been able as yet to complete the extensive investigation required in the bituminous coal industry.

Bituminous coal is produced in commercial quantities in about 30 States. In many of the States the coal lies in several distinct fields. The coal is mined under a large number of different conditions—which vary from field to field and mine to mine. It is of many different qualities—suitable for different uses, such as steam making, gas making, blacksmithing, and for coke. Some coal has such valuable qualities that it can profitably be transported to different markets, other coal must be used in localities near the mines.

The United States Geological Survey has estimated the production of bituminous coal in 1916 at 509,000,000 tons, about three-quarters of it coming from Pennsylvania, West Virginia, Illinois, and Ohio, and the remaining quarter from some 26 other States. As near as can be estimated, about 5,000 producers are engaged in mining coal for commercial purposes.

To answer the questions raised by the Rainey resolution, and report the facts to Congress with recommendations, has necessitated a comprehensive study embracing the principal fields and markets, in order to obtain the facts covering conditions of production and of distribution. The work on production requires a study of mining methods, the production of coke and utilization of by-products, efficiency of management, the conditions involved in the necessary size of the operation, whether on a large or small scale, the natural advantages and disadvantages of different fields, such as physical conditions under which the coal must be mined, thickness of seam, good or bad roofs, occurrence of water and gas in mines, quality of coal, accessibility to markets, railroads, freights, etc.; the cost of production in different fields, including the investment required, cost of mining, the depreciation, etc.; the cost of coal land in fee, or coal royalties paid on leased lands; the questions of necessary coal reserves of operating companies; and the ownership of undeveloped coal lands. Inquiry is also required into the question of irregularity of operation, and its effect on labor conditions, and into the question of eliminating preventable waste in the mining of the Nation's coal resources.

The distribution of bituminous coal is made over almost the entire country, and considerable quantities go also into the export and the bunkering trade. This involves a study of the present methods of selling coal, the principal markets for the different fields, the character of demand for different kinds of coal from different fields, including

variations in demand from seasonal and other causes; the transportation problems involved in getting the coal from the mines to the point of consumption, the functions of the wholesalers, commission men, and retailers in distributing the coal to consumers, and the affiliations of producers with certain classes of consumers, such as railroads and other public utilities, and with industrial consumers.

While this inquiry directed by the Rainey resolution has been in progress, conditions in the bituminous industry have changed radically. The Commission, taking cognizance of this change, directed that special inquiry be made at once into the causes of the extraordinarily high prices of bituminous coal, and the difficulty and delay in obtaining supplies thereof, to the end that immediate remedial action could be recommended to Congress.

In accordance with this direction, such inquiry was at once given precedence in the work on bituminous coal. A report on the results of this inquiry, with suggestions for remedial action which should be taken, was transmitted to the House of Representatives on May 19, 1917.

Further information, both along the lines of the inquiry called for by the Rainey resolution, particularly into the actual cost of producing coal in different fields, and along the line of the inquiry into immediate and intolerable conditions relating to present transportation difficulties, high prices, and unwarranted speculative activities in bituminous coal, is being actively sought by the Commission.

ANTHRACITE COAL REPORT.

CHAPTER I.

BRIEF SURVEY OF ANTHRACITE INDUSTRY.

INTRODUCTION.

The Federal Trade Commission, under two resolutions of the Senate, has made investigations into the anthracite coal industry.

Senate resolution 217, Sixty-fourth Congress, first session, introduced by Senator Hitchcock and adopted June 22, 1916, was as follows:

Resolved, That the Federal Trade Commission be, and it is hereby, requested to make an immediate investigation into the operations and accounts of the leading companies producing anthracite coal for the purpose of ascertaining the facts concerning the recent increase in the price of anthracite coal and report the same to the Senate during the present session of Congress if possible.

Resolved, That the Commission be requested to include in its report a showing of the relation between the cost of labor and the price of anthracite coal prior to said increase and at the present time.

Senate resolution 51, Sixty-fifth Congress, first session, introduced by Senator Calder and adopted April 30, 1917, was as follows:

Resolved, That the Federal Trade Commission be, and it is hereby, requested to report to the Senate at the earliest possible moment all information obtainable relative to the anthracite coal industry in the United States, and to include in its report a statement of the amount of coal produced during the year 1916 and the probable output during the year 1917.

Resolved, That the Commission be requested also to investigate and report to the Senate the cost of mining anthracite coal and the disposition of the anthracite coal supply during the years 1916 and 1917 as compared to previous years.

In response to these resolutions there follows herein a brief account of the anthracite coal industry of the United States; a statement of the anthracite production of 1916 and of the probable output for 1917, together with facts bearing on the question of a shortage of anthracite for the present coal year; a study of the price increases made by leading producers of anthracite following the wage agreement of May, 1916, and of the relation of those price increases to the increased cost of production, particularly the increased cost of labor on account of the agreement; and a study of the unusual market conditions and extremely high prices of anthracite in the fall and winter of 1916-17, including an account of the causes of those conditions and the extent to which producers, jobbers, wholesalers, and retailers of anthracite took advantage of conditions to increase their profits at the expense of the consumer.

This report answers in full the questions raised in Senator Hitchcock's resolution and supplies the data requested in Senator Calder's resolution so far as gathered and digested up to the present time.

SECTION 1. LOCATION OF ANTHRACITE FIELDS.

A high degree of concentration of ownership of a limited natural resource located in a restricted area is the outstanding feature of the anthracite industry. With this localized production and the widespread demand for the output, the transportation of anthracite is a very important factor.

With insignificant exceptions the only deposits of anthracite of commercial value in the United States underlie an area of 484 square miles (309,760 acres) in the northeastern part of Pennsylvania, distant by rail at the nearest points 90 miles from Philadelphia, 145 miles from New York, and 265 miles from Buffalo.

In the trade the anthracite field is divided into three regions—the Wyoming, embracing 176 square miles in the northern part of the field; the Lehigh, 45 square miles in the eastern part; and the Schuylkill, 263 square miles in the southern and western part.

Scranton and Wilkes-Barre are the principal cities of the Wyoming region, Hazleton of the Lehigh, and Pottsville of the Schuylkill.

SECTION 2. PRODUCTION—QUANTITY PRODUCED.

The entire output for the calendar year 1916, as shown by advance data obtained through the courtesy of the Pennsylvania Department of Mines, was 78,273,790 gross tons, as against 79,801,523 tons for 1915.

The classification of the 1916 production, as between quantity shipped out of the mining region, quantity used for fuel by the producing companies, and quantity sold to employees and to the local trade, was as follows:

	Calendar year 1916.	
	Gross tons.	Per cent.
Shipped.....	68,007,295	86.9
Sold locally.....	1,873,468	2.4
Total commercial production.....	69,880,763	89.3
Used at mines in production.....	8,393,027	10.7
Total production.....	78,273,790	100.0

The total commercial production (coal shipped and coal sold locally) was 69,880,763 gross tons, or 89.3 per cent of the total output.

The consideration of the commercial production for the coal year ending March 31, 1917, and of that from April to December, 1916, with reference to the shortage of anthracite during those periods, is taken up elsewhere in this report. (See pp. 57 and 87.)

Railroad coal companies.—By far the largest part of the coal deposits in the anthracite fields is owned or controlled by the anthracite railroad companies or their affiliated mining companies. Like-

wise they produce a heavy percentage of the output, though their percentage of production is less than their percentage of control of deposits because of the large reserves they hold.

The anthracite railroad companies and their principal producing companies operating in these fields are as follows:

<i>Railroad companies.</i>	<i>Anthracite producing companies.</i>
The Delaware & Hudson Co. ¹ -----	{The Delaware & Hudson Co.
Delaware, Lackawanna & Western R. R. Co. ¹	{The Hudson Coal Co.
	Delaware, Lackawanna & Western R. R. Co.
Erie R. R. Co.-----	{Pennsylvania Coal Co.
	{Hillside Coal & Iron Co.
New York, Susquehanna & Western R. R. Co. ²	
Lehigh & New England R. R. Co. ³ -----	Lehigh Coal & Navigation Co. ⁶
Lehigh Valley R. R. Co.-----	{Lehigh Valley Coal Co.
	{Coxe Bros. & Co. (Inc.).
New York, Ontario & Western Ry. Co.	Scranton Coal Co.
Pennsylvania R. R. Co.-----	Susquehanna Coal Co.
Northern Central Ry. ⁴	
Reading Co. ⁵	
Philadelphia & Reading Ry. Co.-----	Philadelphia & Reading Coal & Iron Co.
The Central R. R. of New Jersey ⁶ -----	Lehigh & Wilkes-Barre Coal Co.

Excluding coal used as fuel in the operation of the mines, the output of the collieries owned and controlled by the above railroad coal companies amounted in the calendar year 1916 to 52,945,573 gross tons, or 75.8 per cent of the total commercial anthracite production. In addition to the amount thus produced the railroad coal companies purchased from independents 2,691,123 tons. Thus the quantity which the railroad coal companies controlled for market, not counting coal in storage, was 55,636,696 tons, or 79.6 per cent of the total commercial production for the year.

Independents.—There are numerous so-called independent operators not controlled by the anthracite railroads. The aggregate commercial production of the independents, obtained by subtracting the commercial output of the railroad coal companies from the total commercial production, was 16,935,190 gross tons in 1916, making 24.2 per cent of the whole. However, as just noted, 2,691,123 tons of this was purchased by the railroad coal companies, leaving only 14,244,067 tons, or 20.4 per cent that was marketed through independent channels.

Among the principal independent producers are: Thorne, Neale & Co. interests (Temple Coal Co., Lackawanna Coal Co., Forty Fort Coal Co., Mount Lookout Coal Co., Buck Run Coal Co., and Dark-water Coal Co.); G. B. Markle Co., Kingston Coal Co., Dickson & Eddy interests (West End Coal Co. and Price-Pancoast Coal Co.); Weston Dodson & Co. interests (Dodson Coal Co., C. M. Dodson Coal Co., and Locust Mountain Coal Co.); Madeira, Hill & Co. interests

¹ Mines coal direct.

² Controlled by Erie R. R. Co.

³ Lehigh Coal & Navigation Co. controls the Lehigh & New England R. R. Co.

⁴ Northern Central Ry. is leased to the Pennsylvania R. R. Co.

⁵ Reading Co. controls the Philadelphia & Reading Ry. Co. and the Central R. R. of New Jersey.

⁶ The Lehigh Coal & Navigation Co. owns a large portion of mileage of the lines operated by the Central R. R. of New Jersey and has leased this trackage to the Central R. R. of New Jersey for 900 years, binding itself to ship 75 per cent of its output over the leased trackage.

(Harleigh-Brookwood Coal Co., Thomas Colliery Co., Colonial Collieries Co., and Wilkes-Barre Colliery Co.); J. S. Wentz Co. interests (Maryd Coal Co., Midvalley Coal Co., Upper Lehigh Coal Co., and J. S. Wentz & Co.); and Pardee Bros. & Co. (Inc.).

The 65 per cent contracts.—During the period prior to 1912 a large number of independents had been selling their output to the railroad coal companies under perpetual 65 per cent contracts. In brief, these contracts provided, as to prepared sizes, that the operator should sell his coal f. o. b. the mine to the railroad coal company and should receive therefor 65 per cent of the average price at which the prepared sizes (from the same trade region) sold f. o. b. tide points at or near New York Harbor. A lower per cent applied in the case of pea and smaller sizes. Contracts of this character covered, in 1912, nearly half the tonnage produced by all the independents taken together.

In 1912 the United States Supreme Court directed the canceling of these contracts, holding that "they were designed by the anthracite carriers as a means of controlling the sale of the independent output in the market at tidewater points, thereby preventing competition with their own coal and as a plan for removing the great tonnage controlled by the independents from being used as an inducement for the entry of competing carriers into the district." In accordance with court decrees these contracts, with a few permitted exceptions, had all been abrogated by the middle of 1913.

As a result of the above decrees the tonnage purchased by the anthracite railroads from the independents fell off materially. Some independent operators, however, continued to dispose of their output to the railroad coal companies on the basis of 65 per cent of the tidewater prices on agreements terminable by either party on short notice. By this arrangement, it is pointed out, they are free, on short notice, to market their own coal in case it becomes to their advantage to do so, instead of being perpetually bound as before.

Fee lands and leases.—The coal fields are largely owned in fee by the companies that operate them, but there is nevertheless a considerable area on which operating companies hold only leases. There are many kinds of leases. Some require that all merchantable coal in the ground be mined; some specify the order in which the development of the mine shall proceed; many provide a different royalty on prepared sizes from that on steam sizes. Often the royalty is based on a certain percentage of the tidewater price of coal at the time the coal is mined. As the leases expire and new ones are made, the royalties are practically always increased. Royalties on leases now being made are in the neighborhood of 50 cents a ton.

SECTION 3. WAGE AGREEMENTS AND CORRESPONDING PRICE INCREASES SINCE 1902.

In spite of the geographical and industrial concentration of the anthracite industry, conditions of work in the mines differ much because of differences in the pitch of tunnels, the size and direction of veins, the proportion of slate and sulphur in the coal, the methods of mining, etc. These conditions have necessitated unusually elaborate systems of differential rates of pay. Under the award of March

18, 1903, made by the anthracite strike commission, following the strike of 1902, the rates of pay and hours of work have been governed by an agreement between the miners and the operators and all disputes under that agreement are referred to a board of conciliation.

Under the terms of the award of the anthracite strike commission of 1903, there was granted (with certain exceptions as to engineers and pump men) a 10 per cent wage increase to all employees and a nine-hour day. In addition to the minimum rates thus established a sliding scale was introduced by the same award which provided that for each increase of 5 cents in the average price of prepared sizes of white ash anthracite above \$4.50 per ton f. o. b. New York tidewater, the employees should have an increase of 1 per cent in their compensation. If the price fell below \$4.50, no corresponding reduction in wages was made. This agreement was in effect until March 31, 1906.

The agreement of May 7, 1906, reenacted the same rates for another three-year term, ending March 31, 1909.

The agreement of May 29, 1909, again enacted the rates established by the original award of 1903, together with modifications introduced by the decisions of the board of conciliation. It was further agreed that the rates paid for new work should not be less than the rates under the strike commission award for old work of a similar character.

The agreement of May 20, 1912, provided for an increase of 10 per cent over and above the basic rates that had been in effect since 1903, and abolished the sliding scale.¹ In other respects the 1912 agreement continued the terms and conditions of the anthracite coal strike commission's award and of the agreements of 1906 and 1909.

The current agreement of May 5, 1916 (retroactive to April 1, 1916) increased the contract rates of wages 7 per cent over and above the rates effective since 1912 and, with a few exceptions, changed the nine-hour working day established by the anthracite strike commission to eight hours. This agreement is to run until March 31, 1920. An emergency wage agreement signed on April 26, 1917, has been interpolated in the current agreement, and is to run until March 31, 1918, when the regular agreement is to be resumed. This emergency agreement makes an average increase of about 14 per cent in the wages of the men.

From the above account it is seen that the agreements have involved wage increases only in the case of the original award of 1903 four wage increases have been followed by an increase by the operators in the price of anthracite.

Thus at the close of the strike in October, 1902, a uniform f. o. b. New York tidewater schedule of monthly prices of domestic sizes was put into effect, averaging about 50 cents per ton higher than the previous prices. (E. Jones, *The Anthracite Coal Combination*, p. 160). From this schedule the summer discounts, which had been introduced in 1901, were allowed, namely, 50 cents per ton in April, 40 cents in May, 30 cents in June, 20 cents in July, and 10 cents in August.

¹ The increase in wages was actually only 5.8 per cent above the wages received in the beginning of 1912, because the operation of the sliding scale during the nine years since 1903 had already raised wages 4.2 per cent above the basic rates. (H. Doc. 1442, 62d Cong., 3d sess., pp. 24, 28.)

The April discount was omitted in 1906 when operations were suspended pending the negotiations for the renewal of the wage agreement.

In 1912 the summer discounts were suspended for April and May pending the new wage agreement. Following its adoption the prices advanced about 25 cents per ton, considering the average of all sizes. (House Doc. 1442, 62d Cong., 3d sess., p. 33.)

In 1916 there was likewise an increase in price following the wage agreement. This increase and the extent of its justification is treated in full in Chapter II, together with certain other price increases made in 1916.

SECTION 4. DISTRIBUTION.

Railroad coal companies.—The production of the railroad coal companies is generally distributed by their own selling organizations. There is a notable absence of any large number of middlemen such as intervene between the producer and the consumer in many lines of trade. Under normal conditions the greater portion of coal produced by the railroad coal companies is sold to the retailers direct, a relatively small portion being marketed through jobbers.

The Philadelphia & Reading Coal & Iron Co., the Susquehanna Coal Co., the Lehigh Coal & Navigation Co., and the Lehigh & Wilkes-Barre Coal Co. maintain sales agencies of their own which sell principally to retailers direct. The Lehigh Valley Coal Co. and Coxe Bros. & Co. (Inc.) market their product through the affiliated Lehigh Valley Coal Sales Co., while the Delaware, Lackawanna & Western Railroad Co. sells its output to the Delaware, Lackawanna & Western Coal Co. These coal sales companies sell principally to retailers direct and are so closely identified, both in finance and management, with the producing companies that they may be regarded rather as selling departments of the latter than as separate wholesalers.¹

The Scranton Coal Co. markets its production through Dickson & Eddy, of New York, while the Pennsylvania Coal Co. and the Hill-side Coal & Iron Co. sell their output through Williams & Peters, also of New York. Dickson & Eddy and Williams & Peters maintain various branch offices and sell this coal on a commission basis, principally to retailers direct. The Hudson Coal Co., which purchases and prepares at its breakers the mine production of the Delaware & Hudson Co., sells entirely at the mines. Its coal is bought principally by wholesalers located in different parts of the country, except for about 1,700,000 tons bought annually by certain other railroad coal mining companies. A considerable quantity of the steam sizes is also sold direct to manufacturers and to other railroads.

The principal branch offices of the selling departments of the railroad coal companies are at New York, Boston, New Haven, Providence, Philadelphia, Baltimore, Albany, Utica, Syracuse, Rochester, Buffalo, Montreal, Cleveland, Detroit, Chicago, Milwaukee, and

¹ The Delaware, Lackawanna & Western Railroad Co. owns a large controlling interest of the capital stock of the Delaware, Lackawanna & Western Coal Co. Originally the stockholders of the Lehigh Valley Coal Sales Co. and the Lehigh Valley Railroad Co. were practically identical. The Lehigh Valley Railroad Co. owns all of the capital stock of the Lehigh Valley Coal Co.

Minneapolis. From these points sales agents canvass their designated territories. The companies sell to the retailers direct through these agents, who generally are paid on a salary basis. Thus the retailers have the opportunity to purchase coal from the railroad coal companies at a price to which has been added the expense and profit of but one selling department.

Independent producing companies.—Several of the independent producing companies maintain sales agencies, which sell to the retailers direct and, at times when the market is dull, or in a feverish demand, to jobbers (because the jobber is in a position to obtain more for the coal than the independent producer). The greater number of independent producing companies, however, market their coal through jobbers on a commission basis. Generally the independent producing companies which contract with selling agencies and jobbers to market their entire production on a commission basis require that the coal be sold at the best market price while the selling agency or the jobber is to receive a stated sum per ton, usually 15 cents on prepared sizes and 10 cents on steam sizes. The independent producer is generally not concerned as to whether his sales agent sells to retailers direct or to jobbers. He asks that he receive a return commensurate with the best market prices.

A few independent producers do not contract with sales agencies or jobbers for the marketing of their coal, but sell outright to various jobbers and retailers. From week to week they sell to different firms, disposing of their product to the highest bidders. Generally these producers sell to jobbers for the reason that their own selling organizations are not extensive enough to reach the retailers.

Some of the independent producing companies sell their entire output to the railroad coal companies f. o. b. the mine. This coal is marketed by the latter in the same manner as the railroad coal.

Jobbers.—The trade has applied the term "jobber" to any firm not a coal producer which sells coal by the carload or barge load. However, concerns such as Williams & Peters and Dickson & Eddy, which are sole selling agents of the railroad coal companies they represent, are not called jobbers. The selling agencies of the independent producers are commonly included in the term jobber. The jobber does not physically handle the coal he buys and sells. He simply finds a buyer and reconsigns to him the bill of lading for coal on the car or in the barge.

The sources of the jobber's supply of coal are (1) independent producing companies for which he is the sales agent; (2) railroad coal companies which have contracts with him for the sale of certain quantities, usually of broken or of the steam sizes, or which sell him other coal that he is supposed to resell to the retailers at not more than 10 cents above circular prices; (3) independent producing companies which have no selling agencies but sell him outright; and (4) other jobbers and sales agencies. There are a number of jobbers whose supply is drawn chiefly from other jobbers and sales agencies. A few principal jobbers maintain branch offices in different parts of the country. The greater number of jobbers, however, supply the local trade only.

Local wholesale trestle and dock companies.—The wholesale trestle and dock companies differ from the jobbers in that they physically

receive, store, and reload the coal, selling it either in carload lots to outlying dealers or in wagon-load lots to local dealers. In Buffalo, Rochester, and Chicago wholesale yards or docks are operated, at which the retail distributors purchase their coal, although there are some retailers in each of these cities who buy in carload lots shipped from the mines and maintain their own yards. In Chicago many retailers with yards of their own purchase thus from local wholesale companies, while all the 4,000 to 5,000 "peddlers," or smaller dealers without yards, depend wholly upon the wholesale yards or docks for their supply. In each of these cities some of the storage trestles are operated by railroad coal companies themselves, while others are maintained by local companies. In several instances the wholesale concerns also operate retail distributing departments. This is the case in Minneapolis and St. Paul. The wholesale business of these two cities and of the large territory tributary to Duluth is in the hands of so-called dock companies, with docks at the head of the Lakes, which handle coal largely from railroad coal companies.

SECTION 5. CIRCULAR PRICES AND PREMIUM PRICES.

On April 1 of each year it has been the practice of the Philadelphia & Reading Coal & Iron Co. to send to the trade a list of prices for anthracite. Following this announcement the other railroad coal companies publish price lists which quote practically the same prices as the Philadelphia & Reading. These prices are known in the trade as "circular" or "company" prices. They are the basic prices for the following year, and from them are deducted the summer discounts, as explained above, of 50 cents for shipments in April, 40 cents for May, 30 cents for June, 20 cents for July, and 10 cents for August. Normally, the full basic prices which are reached in September are maintained until the following April.

With very few exceptions the sales of the railroad coal companies are at the circular prices. Sales made during the discount months are billed at the price for the month of actual shipment, even though the order may have been placed in a month when the price was lower.

Independent producers, however, frequently do not adhere to the "company" circular prices. In the summer they generally sell below "circular" and in the winter above "circular." Their situation is different from that of the large railroad coal companies. If the latter are unable to market their entire production in the summer they place their surplus coal in storage. The independent producers, on the other hand, generally have no storage facilities. Thus, they must either sell below the circular prices or curtail production. If they can market their entire production at a figure somewhat less than the railroad coal companies are asking, they generally prefer not to close their mines.

In winter, however, the situation is commonly the reverse. The demand for certain grades and sizes is greater than the supply. The supply of the railroad coal companies is not sufficient to meet the demands of the retailers. The independent producers are then able to sell their coal at prices above the circular. These prices are

known as "premium" prices. A few of the independents, however, follow the practice of the railroad coal companies and sell to their regular customers at circular, summer and winter.

The present spring and summer have been abnormal in that the panic buying of consumers has enabled the independents to secure high premiums for their coal, except so far as they have voluntarily limited the price charged to conform to their view of other duty in the present national emergency.

Company connections.—It is a common understanding in the coal trade that a retailer who purchases his supply at circular in the summer months from a producing company or sales agent should receive his supply during the winter months at circular from the same source. Thus, the retailer who does not go into the market in summer to purchase coal from other sources at a low figure is generally taken care of during the winter at circular prices. Such retailers are said to have "good company connections."

CHAPTER II.

ANTHRACITE PRODUCTION IN 1916-17.

THE PROSPECTIVE SUPPLY OF ANTHRACITE FOR 1917.

Currency has been given to various allegations of a shortage of 12,000,000 to 15,000,000 tons in the supply of anthracite that is said to be required to meet the coming year's demand.

It is a common practice among dealers in all lines of trade to circulate reports of shortages in supply in order to stimulate demand and increase business. But it is particularly unfortunate in the present time of national crisis for dealers or the press, even with the best of intentions, to give currency to such reports which can not be substantiated.

A similar cry of shortage was made last fall, with disastrous results to the public. As a matter of fact, the panic demand last year was unwarranted by any material shortage of supply. Practically all the demand for anthracite was met in the course of the year and would probably have been met as needed and without great increase in prices if the panic fear of the public had not been played on and used by the trade.

The only condition resulting from the past which affects the future supply is the lessened stocks. According to reports from all companies having any considerable storage facilities, stocks in hands of anthracite producers on April 1, the beginning of the coal year, have been as follows:

	Gross tons.
April 1, 1913 -----	3, 891, 711
April 1, 1914 -----	5, 223, 844
April 1, 1915 -----	7, 406, 502
April 1, 1916 -----	4, 585, 906
April 1, 1917 -----	894, 347

The above shows that stocks on hand at the beginning of the past coal year—April, 1916—were about normal, and that stocks on hand April 1, 1917, indicated a reduction during the year of 3,691,559 tons.

This 3,691,559 tons represents the handicap with which the present coal year starts. There is little question that the production during the year can be increased sufficiently to offset the lessened stock at the beginning.

The present spring has been an abnormally late one and has undoubtedly resulted in the consumption of considerable tonnage that normally would have gone into stock. But the extraordinary demand in April and May of this year can be explained only in part by the late spring, and it is the better opinion, held by many of the best-informed men in the trade, that there is at present in cellars of consumers a much greater tonnage than has heretofore been the rule.

Commercial production of anthracite for the past four coal years was as follows, based on statistics compiled by the Anthracite Bureau of Information:

	Gross tons.
April 1, 1913, to March 31, 1914.....	66,680,768
April 1, 1914, to March 31, 1915.....	68,139,522
April 1, 1915, to March 31, 1916.....	71,332,976
Average for three years.....	68,717,755
April 1, 1916, to March 31, 1917.....	67,776,589

These figures show that during the past coal year production was 3,556,387 tons less than the preceding year (when production was abnormally high), and 941,166 tons less than the average of three preceding years. The unusual production of the year ending April 1, 1916, resulted from the abnormal quantity mined in anticipation of possible trouble in the adjustment of the miners' wage scale a year ago.

Disregarding exports and local sales to miners, neither of which materially affected conditions, the marketed tonnage by coal years was as follows:

Period.	Production.	Taken from stock.	Added to stock.	Marketed tonnage.
Year ending Mar. 31, 1914.....	66,680,768	.....	1,332,133	65,348,635
Year ending Mar. 31, 1915.....	68,139,522	.....	2,182,658	65,956,864
Year ending Mar. 31, 1916.....	71,332,976	2,820,596	.....	74,153,572
Year ending Mar. 31, 1917.....	67,776,589	3,691,559	.....	71,468,148

The above shows that during the past coal year the marketed tonnage was only 2,685,424 less than the abnormal year preceding, and was over 5,000,000 tons more than in 1913-14 and 1914-15.

The Commission's statement that it expects an increased output sufficient to meet the demand for anthracite is based on the authoritative figures it has collected on stocks of producers and upon assurances from leading anthracite operators and representatives of the United Mine Workers of America that this will be a year of unusually large production. One of the very large operators stated that during 1917 his company alone expected to produce 2,000,000 tons more than last year.

The gravest problem will be to prevent the diversion of anthracite tonnage from normal use to take the place of unreasonably high priced bituminous coal and coke.

Bearing upon the supply, statistics are available for the first five months of 1917 and a comparison of these figures with those of preceding years is significant, especially when taken in connection with assurances given for the future months of 1917. The following statement of commercial production is compiled from statistics collected by the Anthracite Bureau of Information:

	Average for years 1914-16.	1916	1917	1917 against average of 1914-16.	1917 against 1916.
	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.
January.....	5,297,894	5,884,350	5,940,725	+ 642,831	+ 56,375
February.....	4,722,557	5,696,306	5,178,432	+ 455,875	- 517,874
March.....	5,455,782	6,127,351	6,989,075	+1,533,293	+ 861,724
April.....	5,752,191	4,528,784	5,592,299	- 159,892	+1,063,515
May.....	5,928,133	5,547,899	6,917,525	+ 989,392	+1,369,626
Total.....	27,156,557	27,784,690	30,618,056	+3,461,499	+2,833,366

The important figures in the above statement are the 2,833,366 tons increase in the five months' period of 1917 over the same period of 1916, and the 3,461,499 tons increase in the five months of 1917 over the average of the five months for the three years 1914-1916.

The coal year beginning with April 1, 1917, is the real period to consider with reference to this year's supply. April, 1917, shows an increase over April, 1916, of 1,063,515 tons. May shows the remarkable increase of 1,369,626 tons. April and May, the first two months of the new coal year, show an increase of 2,433,141 tons, or 24 per cent over the corresponding months of 1916.

These increases for January to May, it should be remembered, are increases beyond a 1916 period of abnormally high production and indicate that the present year's output will be unprecedented.

The great essential to the realization of this production is the recognition by the Government that men engaged in mining and mine clerks should be exempt from military service.

The increase in demand, so far as it is real, has arisen from the diversion of domestic anthracite to industrial use in competition with bituminous and coke and from the natural increase in consumption due to the gradually increasing population. The tendency of population toward apartment houses in which steam sizes are used offsets to a degree the effect of increased population. Enactments by Congress of legislation that will lead to relief from the bituminous situation will remove much of the abnormal demand for domestic sizes of anthracite for industrial use and help restore the anthracite trade to the ordinary channels.

There has undoubtedly been an immense artificial demand for anthracite this spring. Thousands of householders who normally do not buy till fall have this year poured in their orders in April and May.

A fair consideration of all the factors here mentioned, noting in particular the very great increase in production already shown by the first two months of the new coal year, together with the prospect of such continued increase and the indication of unusual quantities in storage by consumers, contradicts reports of any prospective shortage of anthracite, provided the bituminous and coke production is increased sufficiently to take care of the demands properly belonging to those fuels, thus conserving anthracite for its normal uses.

The following table is based on figures of anthracite production by sizes furnished by all anthracite operators, including the smallest, and in this respect will differ from the Anthracite Bureau of Information reports, which reflect production in the form of statistics covering shipments by all the initial anthracite carriers. Other data on the anthracite supply appear in different parts of this report.

TABLE 1.—Total commercial production of anthracite by railroad coal companies and independent coal operators, January–May, 1917.

[Excluding fuel used in mining operations.]

RAILROAD COAL COMPANIES.

	January.			February.			March.			April.			Total, January to April, inclusive.			May.		
	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.
DOMESTIC.																		
Egg.....	646,503	20.04	13.36	562,189	19.93	13.44	708,679	19.88	12.85	568,620	19.62	12.47	2,485,991	19.87	13.02	674,457	19.85	12.23
Stove.....	927,209	28.74	19.16	812,637	28.80	19.43	1,019,151	28.58	18.47	826,155	28.50	18.11	3,585,152	28.65	18.77	966,713	28.45	17.53
Nut.....	1,119,986	34.71	23.15	989,117	35.06	23.66	1,246,276	34.96	22.59	1,008,017	34.78	22.10	4,363,396	34.88	22.83	1,195,547	35.18	21.67
Pea.....	532,666	16.51	11.01	457,373	16.21	10.94	591,043	16.58	10.71	495,540	17.10	10.86	2,076,622	16.60	10.87	561,179	16.52	10.17
Total domestic.	3,226,364	100.00	66.68	2,821,316	100.00	67.47	3,565,149	100.00	64.62	2,898,332	100.00	63.54	12,511,161	103.00	65.51	3,397,896	100.00	61.60
INDUSTRIAL.																		
Broken and larger...	334,473	.....	6.91	292,151	.....	6.99	400,329	.....	7.26	329,520	.....	7.22	1,356,473	.....	7.10	391,665	.....	7.10
Buckwheat.....	642,535	.....	13.28	594,649	.....	13.27	737,882	.....	13.37	620,588	.....	13.61	2,555,654	.....	13.38	757,712	.....	13.74
All other steam sizes.	634,949	.....	13.13	513,189	.....	12.27	813,537	.....	14.75	713,121	.....	15.63	2,674,787	.....	14.01	968,593	.....	17.56
Total industrial (steam sizes).....	1,611,957	.....	33.32	1,339,980	.....	32.53	1,951,748	.....	35.38	1,663,229	.....	36.46	6,586,914	.....	34.49	2,117,961	.....	38.40
Total, all sizes.	4,838,321	.....	100.00	4,181,296	.....	100.00	5,516,897	.....	100.00	4,561,561	.....	100.00	19,098,075	.....	100.00	5,515,857	.....	100.00

TABLE 1.—Total commercial production of anthracite by railroad coal companies and independent coal operators, January–May, 1917—Continued.
[Excluding fuel used in mining operations.]

INDIVIDUAL COAL OPERATORS.

	January.			February.			March.			April.			Total, January to April, inclusive.			May.		
	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.
DOMESTIC.																		
Egg.....	203,379	20.86	14.68	182,841	21.06	14.69	219,906	20.90	14.24	176,951	21.17	14.31	783,077	20.98	14.47	236,292	20.85	12.35
Stove.....	285,061	29.23	20.57	257,388	29.65	20.68	307,981	29.26	19.94	238,389	28.51	19.28	1,088,819	29.18	20.12	329,884	29.10	17.24
Nut.....	331,090	33.95	23.89	290,469	33.45	23.34	353,246	33.57	22.87	285,566	34.16	23.69	1,240,371	33.77	23.29	378,160	33.36	19.76
Pea.....	155,097	15.90	11.19	137,064	15.79	11.02	170,879	16.24	11.06	135,061	16.15	10.92	598,101	16.03	11.05	189,195	16.69	9.88
Unsize.....	550	.06	.04	458	.05	.04	304	.03	.02	77	.01	.01	1,389	.04	.03	.....	.....	.....
Total domestic..	975,177	100.00	70.37	868,220	100.00	69.77	1,052,316	100.00	68.13	836,044	100.00	67.61	3,731,757	100.00	68.96	1,133,531	100.00	59.23
INDUSTRIAL.																		
Broken and larger...	10,025	.....	.72	10,487	.....	.84	11,227	.....	.73	10,098	.....	.87	42,437	.....	.78	11,067	.....	.58
Buckwheat.....	191,827	.....	13.82	170,236	.....	13.68	219,502	.....	14.21	173,329	.....	14.02	754,594	.....	13.95	300,886	.....	15.72
All other steam sizes.	209,087	.....	15.09	195,472	.....	15.71	261,443	.....	16.93	216,424	.....	17.50	882,426	.....	16.31	468,279	.....	24.47
Total industrial (steam sizes).....	410,639	.....	29.63	376,195	.....	30.23	492,172	.....	31.87	400,451	.....	32.39	1,679,457	.....	31.04	780,202	.....	40.77
Total all sizes.....	1,385,816	.....	100.00	1,244,415	.....	100.00	1,544,488	.....	100.00	1,236,493	.....	100.00	5,411,214	.....	100.00	1,913,733	.....	100.00

TABLE 1.—Total commercial production of anthracite by railroad coal companies and independent coal operators, January–May, 1917—Continued.

[Excluding fuel used in mining operations.]

RAILROAD COAL COMPANIES AND INDIVIDUAL COAL OPERATORS COMBINED.

	January.			February.			March.			April.			Total, January to April, inclusive.			May.		
	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.	Tons.	Per cent of domestic production.	Per cent of total production.
DOMESTIC.																		
Egg.....	849,882	20.23	13.65	745,030	20.20	13.73	928,585	20.11	13.15	745,571	19.96	12.86	3,269,068	20.13	13.34	910,749	20.10	12.26
Stove.....	1,212,270	28.85	19.48	1,070,025	29.00	19.72	1,327,132	28.74	18.80	1,064,544	28.51	18.36	4,673,971	28.77	19.07	1,296,597	28.61	17.45
Nut.....	1,451,076	34.54	23.31	1,279,586	34.68	23.58	1,599,622	34.64	22.65	1,293,583	34.64	22.31	5,623,767	34.62	22.95	1,573,707	34.73	21.18
Pea.....	687,763	16.37	11.05	594,437	16.11	10.96	761,922	16.50	10.79	630,601	16.89	10.88	2,674,723	16.47	10.91	750,374	16.56	10.10
Unsize.....	650,550	0.01	0.01	458	0.01	0.01	304	0.01	0.00	77	0.00	0.00	1,359	0.01	0.00	.....	.....	.....
Total domestic.....	4,201,541	100.00	67.50	3,689,536	100.00	68.00	4,617,465	100.00	65.39	3,734,376	100.00	64.41	16,242,918	100.00	66.27	4,531,427	100.00	60.99
INDUSTRIAL.																		
Broken and larger.....	344,498	.....	5.54	302,638	.....	5.58	411,556	.....	5.83	340,218	.....	5.87	1,398,910	.....	5.71	402,732	.....	5.42
Buckwheat.....	834,062	.....	13.40	724,885	.....	13.36	957,884	.....	12.56	793,917	.....	13.69	3,310,248	.....	13.51	1,088,598	.....	14.25
All other steam sizes.....	844,036	.....	13.56	708,652	.....	13.06	1,074,980	.....	15.22	923,545	.....	16.03	3,557,213	.....	14.51	1,436,863	.....	19.34
Total industrial (steam sizes).....	2,022,596	.....	32.50	1,736,175	.....	32.00	2,443,920	.....	34.61	2,063,680	.....	35.59	8,266,371	.....	33.73	2,898,163	.....	39.01
Total all sizes.....	6,224,137	.....	100.00	5,425,711	.....	100.00	7,061,385	.....	100.00	5,798,056	.....	100.00	24,508,289	.....	100.00	7,429,590	.....	100.00

CHAPTER. III.

ANSWER TO SENATE RESOLUTION 217, SIXTY-FOURTH CONGRESS, (SENATOR HITCHCOCK), JUNE 22, 1916.

Senate resolution 217, Sixty-fourth Congress (Senator Hitchcock), June 22, was as follows:

Resolved, That the Federal Trade Commission be, and it is hereby, requested to make an immediate investigation into the operations and accounts of the leading companies producing anthracite coal for the purpose of ascertaining the facts concerning the recent increase in the price of anthracite coal, and report the same to the Senate during the present session of Congress, if possible.

Resolved, That the Commission be requested to include in its report a showing of the relation between the cost of labor and the price of anthracite coal prior to said increase and at the present time.

In specific response to this resolution, there follows a study of the price increases made by leading producers of anthracite following the wage agreement of May, 1916, and of the relation of those price increases to the increased cost of production, particularly the increased cost of labor. The questions raised in Senator Hitchcock's resolution are answered in full in this chapter.

SECTION 1. INCREASES IN CIRCULAR PRICES, JANUARY TO SEPTEMBER, 1916.

Circulars issued by the principal railroad coal sales companies have been secured showing prices effective in the territorial divisions for which prices are quoted from January to September, 1916, and the prices have been arranged in tabular form. For the important companies not issuing circulars, statements of the prices in effect have been obtained.

The prices for the territorial trade, covered by territorial circulars, have been uniform for nearly all railroad coal companies. The few exceptions are noted on the accompanying table.

It is generally known that winter prices in normal years have become effective September 1 and remained unchanged through the winter until April, when a 50-cent reduction has been made, followed by a 40-cent discount in May, 30 in June, 20 in July, and 10 in August, the full winter price being again restored in September.

Tonnage tax.—This rule was slightly varied in the winter season beginning September, 1915, not by the change of published prices, but on account of the Pennsylvania tax. The prices had, since 1913, been made by most companies to include an amount covering the Pennsylvania State tax (Roney act) of $2\frac{1}{2}$ per cent of value at the mine. This amount was approximately 10 cents per ton on prepared sizes and 5 cents on pea. Those companies whose published prices

did not include the tax, added it as a separate item on their bills. In considering the prices, for comparison, they have all been put on a basis exclusive of this tax. The constitutionality of the tax was denied by a decision of the courts, 1915. The Dawson act was then passed, to replace the Roney act, and all companies increased their prices 10 cents on prepared sizes and 5 cents on pea coal, beginning January 1, 1916. The Dawson Act was likewise declared unconstitutional May 10, 1917.

Omission of April discount.—The usual April discount of 50 cents per ton was not announced in April, 1916, due to the uncertainty of the labor situation at the mines, as explained in more detail elsewhere.

The winter prices were thus kept in effect, the only change being in the mine prices of coal shipped to New York tidewater ports from Lehigh, Schuylkill, and Wyoming regions. This change was brought about in April, not by a change in circular, but by failure to change the delivered prices at New York tidewater, following changes in freight rates ordered by the Interstate Commerce Commission. The rates were reduced 10 cents per ton on prepared sizes and 5 cents on pea coal; they were raised 15 cents per ton on buckwheat, the mine prices, inversely, increasing 10 cents on prepared sizes, 5 cents on pea, and decreasing 15 cents per ton on buckwheat. Quoted prices in other territories remained unchanged at this time.

Increase of basic circular prices in May, 1916.—After the omission of the usual April discount and after the adjustment of the labor difficulties which were the principal cause of the omission, new circulars were issued in May, advancing basic prices generally from 15 to 40 cents a ton on prepared sizes and from 25 to 70 cents on pea and buckwheat. The usual May discounts of 40 cents per ton from these circulars effected a net reduction in most cases from the prices of the previous month. Each month thereafter a 10-cent increase was made until the full circular was established on September 1. These changes were generally the same for all companies in any one territory.

The circular prices of railroad coal sales companies have been tabulated on the basis of f. o. b. mines, showing the principal changes from September, 1915, to September, 1916, and the amounts of the increases. The table is presented below. Abbreviations have been adopted for the various companies as follows:

P. & R.	Philadelphia & Reading Coal & Iron Co. (P. & R. R. R.).
D. L. & W.	Delaware, Lackawanna & Western Coal Co. (D. L. & W. R. R.).
L. V. C. S.	Lehigh Valley Coal Sales Co. (L. V. R. R.).
W. & P.	Williams & Peters, sales agents for Pennsylvania Coal Co. and Hillside Coal & Iron Co. (Erie R. R.).
L. & W. B.	Lehigh & Wilkes-Barre Coal Co. (C. R. R. of N. J.).
S. C. Co.	Susquehanna Coal Co. (P. R. R.).
L. C. & N.	Lehigh Coal & Navigation Co. (This company issued no circulars; prices in effect have been tabulated.)
D. & E.	Dickson & Eddy, sales agents for Scranton Coal Co. (N. Y., O. & W. R. R.).

This table shows that during the period covered the price at the mine varied according to the territory into which the coal was to be shipped. Such price differentials between territories had been the rule for several years, but in the winter of 1916-17 and in May, 1917, increases in circular prices were made in such a way as to avoid territorial differentials.

It should be emphasized that the prices given in the following table were the regular "asking" prices of the railroad coal companies. Few, if any, sales are made above these prices, but often sales are made below them, because of the conditions in the market at the time. Many computations of how much the increases in price in May, 1916, amounted to on the average of all the sizes have been published in the trade press and elsewhere, but these have all had to use these asking prices for each size as their basis of calculation in connection with the statistics of the proportion of each size normally produced. The Commission, however, in section 3, below, presents the exact average receipts per ton, by sizes, as taken from the books of the companies. These figures show the actual results of the business reduced to a per ton basis for each size, and are more authoritative than is possible for figures based on the methods of computation referred to above. Hence the following table of circular prices should not be used for the purpose of determining actual average selling prices or the increase in the same.

TABLE 2.—Circular price increases on domestic sizes of anthracite, *f. o. b.* mine basis, for shipment to various territories, January—September, 1916.

Destination and size.	1916				Increases.			
	1915							
	January.	April.	May.	September.	January, 1916, over September, 1915.	April, 1916, over January, 1916.	September, 1916, over April, 1916.	September, 1916, over September, 1915.
	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. L. & W. B. L. C. & N. D. & E.
	\$3.50 3.75 3.75 4.00	\$3.60 3.85 3.85 4.10	\$3.50 3.60 3.85 3.90	\$3.50 4.00 4.25 4.30	\$0.10 .10 .10 .10	\$0.10 .10 .10 .10	2 \$0.10 .15 .40 .20	\$0.10 .35 .60 .40
NEW YORK TIDEWATER.								
Broken 1.....								
Egg.....								
Stove.....								
Chestnut.....								

¹ D., L. & W. Co. circular: \$3 in January and \$3.10 in April, 1916, as against \$2.90 in September, 1915. No circular in May or September, 1916. L. C. & N. Co.: No prices submitted for any of the months.
² Decrease.

TABLE 2.—Circular price increases on domestic sizes of anthracite, f. o. b. mine basis, for shipment to various territories, January—September, 1916—Continued.

Destination and size.	1916			1915	Increases.		
	January.	May.	September.	September.	January, 1916, over September, 1915.	September, 1916, over January, 1916.	September, 1916, over September, 1915.
	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.	P. & R. L. V. C. S. L. & W. B. S. C. Co. L. C. & N.
LINE TRADE AND AS FAR SOUTH AS WASHINGTON.							
Broken.....	\$3.60	1 \$3.60	1 \$3.60	\$3.50	\$0.10		\$0.10
Egg.....	3.85	2 3.75	2 4.15	3.75	.10		.40
Stove.....	4.10	4.00	4.40	4.00	.10		.40
Chestnut.....	4.25	4.10	4.50	4.15	.10		.35

1 S. C. Co. circular: \$3.45 in May, \$3.55 in June, \$3.65 in July, and \$3.85 in September. L. C. & N. Co.: No prices submitted for broken.

2 S. C. Co. circular: \$3.70 in May, increasing 10 cents each month to \$4.10 in September.

3 S. C. Co.: \$3.85 in January, \$3.70 in May, \$4.10 in September, 1916; \$3.75 in September, 1915.

4 S. C. Co.: \$4.10 in January, \$3.95 in May, \$4.35 in September, 1916; \$4 in September, 1915. L. & W. B.: \$4.25 in January, \$4.05 in May, \$4.45 in September, 1916.

TABLE 2.—Circular price increase on domestic sizes of anthracite, f. o. b. mine basis, for shipment to various territories, January—September, 1916—Continued.

Destination and size.	1916			1915	Increases.		
	January.	May.	September.	September.	January, 1916, over September, 1915.	September, 1916, over January, 1916.	September, 1916, over September, 1915.
	P. & R. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.	P. & R. & W. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.	P. & R. & W. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.	P. & R. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.	P. & R. & W. D., L. & W. L., V. C. S. W. & P. S. C. Co. D. & E.
	\$3.60 3.85 3.85 4.10	\$3.45 3.70 3.70 3.95	\$3.85 4.10 4.10 4.35	\$3.50 3.75 3.75 4.00	\$0.10 .10 .10 .10	\$0.25 .25 .25 .25	\$0.35 .35 .35 .35
BUFFALO.							
Broken.....							
Egg.....							
Stove.....							
Chestnut.....							

TABLE 2.—Circular price increase on domestic sizes of anthracite, f. o. b. mine basis, for shipment to various territories, January—September, 1916—Continued.

Destination and size.	1916		1915	Increases.	
	January.	May.	September.	January, 1916, over September, 1915.	September, 1916, over January, 1916.
	P. & R. D., L. & W. L., V. C. S. W. & P. D. & E. L. C. & N.	P. & R. D., L. & W. L., V. C. S. W. & P. D. & E. L. C. & N.	P. & R. D., L. & W. L., V. C. S. W. & P. D. & E. L. C. & N.	P. & R. D., L. & W. L., V. C. S. W. & P. D. & E. L. C. & N.	P. & R. D., L. & W. L., V. C. S. W. & P. D. & E. L. C. & N.
CHICAGO.	Broken 1.....	\$3.65	\$3.93	\$0.12	\$0.40
	Egg.....	3.93	4.20	.12	.39
	Stove.....	3.92	4.20	.11	.39
	Chestnut.....	4.20	4.48	.11	.39

¹ L. C. & N. Co., no prices submitted.

SECTION 2. CAUSES ALLEGED IN JUSTIFICATION OF INCREASE IN CIRCULAR PRICES IN JANUARY, APRIL, AND MAY, 1916.

The increase in circular prices which was made on January 1, 1916, was attributed by some of the operators to the workmen's compensation act of Pennsylvania, effective on that date, while other operators attributed it to the Pennsylvania State tax of $2\frac{1}{2}$ per cent of the f. o. b. mine price.

The omission of the customary discount in April, 1916, constituted a price increase which the operators alleged was justified by the uncertainties arising from the inability of the operators and miners to reach an agreement.

Many causes were advanced by the operators for the increase in circular prices in May, 1916. Assuming that all increases in cost of production which had taken place prior to the spring of 1912 were fully covered by the price increases made in May of that year, only the increases made in the last four years need to be reviewed here.

Much publicity has been given to the wage increase of May 5, 1916, as a reason for the price increases made shortly after that date. However, increased labor cost, though the principal item, is not the only reason assigned by the operators for the advance in prices.

Among the general causes of increased costs during this period the operators alleged the increased cost of supplies, the increasing quantities of water, rock, and gas which have to be removed in deeper mining, and the decreasing proportion of prepared sizes. Among the specific causes urged were increased taxation during the last few years, the workmen's compensation act of Pennsylvania, effective January 1, 1916, and, most important of all, the wage increase of May, 1916.

Supplies.—In the long list of mining supplies used, explosives, round timber, rails, mine car axles, steel-wire rope, castings, copper wire, copper rivets, sheet steel, cast-iron pipe, cement, brattice cloth, harness goods, and mules were usually mentioned by the operators as having increased greatly in price between May, 1912, and May, 1916. The full increase in cost of explosives falls on the companies, their agreement with the miners providing a flat rate for explosives used.

Deeper mining.—It was pointed out by the operators that deeper mining becomes necessary as upper coal beds become exhausted. Water constantly has to be removed from the mines, and the quantity reaches, in some collieries, as much as 25 tons of water for each ton of coal mined, increasing as lower beds are worked.

They pointed out that as mining proceeds year after year the deeper and thinner seams must be relied upon, necessitating the removal of larger quantities of rock and refuse to get at the coal; and that the rate paid the miner for rockwork increases progressively in proportion to the quantity to be removed. Also, they pointed out that mining at greater depth naturally requires more expensive ventilation, and that as the mine grows in extent the underground transportation becomes more and more expensive.

Pennsylvania workmen's compensation act.—The Pennsylvania workmen's compensation act of June 2, 1915, became effective Janu-

ary 1, 1916. It throws all the burden upon the employer and provides for money compensation for personal injuries sustained by accident in the course of employment, causing disability for more than 14 days or causing death within 300 weeks.

The death benefits include \$100 funeral expenses and up to 60 per cent of weekly wages to the widow for a period not exceeding 300 weeks, and with provision for children. Basic wages are not less than \$10 nor more than \$20 weekly.

Compensation for disability is limited to 50 per cent of weekly wages for 500 weeks, the total payments not to exceed \$4,000.

The Pennsylvania tonnage tax and its effect on prices.—On July 1, 1913, the Pennsylvania State tax on anthracite (under the Roney Act of June 27, 1913) amounting to $2\frac{1}{2}$ per cent on the market value of anthracite coal at the mines, became effective. Some of the mining companies immediately began adding the amount of the tax to their bills, as a separate item, while others deferred action until December 1, 1913, and then advanced the circular price sufficiently to cover the tax item. The tax amounted to approximately 10 cents a ton on the domestic sizes, five cents a ton on pea, and three cents on buckwheat. In some instances the tax was not added and by some companies the tax was added without having been separately itemized.

This tax was declared unconstitutional by the Supreme Court of Pennsylvania in an opinion handed down in October, 1915 (96 Atlantic, 246). In anticipation of the court's action, the legislature repealed the Roney Act, as of June 1, 1915, replacing it by the Dawson Act (Pa. Laws, 1915, p. 721), which was drawn to meet the constitutional difficulty, but which imposed a similar rate.

The State has not collected any tax under the Dawson Act, its constitutionality having been attacked by the operators in the courts. Beginning January 1, 1916, the coal companies in every instance ceased to add the tax as a separate item, but the price of coal was maintained at a level which included both the regular January price and an amount equivalent to the tax (Report of Pennsylvania Anthracite Coal Commission, p. 27). In May, 1917, the Dawson Act was likewise declared unconstitutional.

The wage agreement of 1916, and effect of labor conditions on cost of production.—The new wage agreement of May 5, 1916, retroactive to April 1, has already been sufficiently described so far as its features affecting labor cost are concerned. Briefly, it established the eight-hour day and provided, with a few exceptions, for a 7 per cent increase over the 1912 rates. The operators emphasized this as a double increase of cost—an increase of 7 per cent in wages and a decrease of 11 per cent in hours of work.

They also pointed out that while the agreement was being negotiated considerable idleness among the miners curtailed the April (1916) output, which was 2,000,000 tons below that of 1915.

They further stated that while the eight-hour agreement provided that a full eight hours should be worked, many of the miners have been satisfied to work fewer hours a day than this, thus using the increased rate of pay to add to their leisure rather than to their income, but thereby cutting down production and increasing the cost

of operation. An unusual number of full holidays taken by the miners was cited by the operators as a further cause for lessened output and increased cost. They likewise emphasized the cutting down of production by the large number of local strikes, many of them the so-called "button" strikes in which the paid-up union men at a colliery or in a part of a colliery frequently refuse to work so long as there are any men in the colliery without the union button or whose union button does not indicate that their dues have been paid to date.

The operators further urged that the results following the wage agreement were not justifying the contention of the miners that the reduction in hours would increase the efficiency and that as much coal would be mined in eight hours as was formerly mined in nine.

Thus the operators contended, in brief, that the reduction of hours by the agreement, failure of miners to work even this reduced number of hours, excessive holidays and petty strikes—all reduced output, and thus increased the cost of production in addition to the increase of cost due to higher wages.

SECTION 3. RESULTS OF INVESTIGATION OF THE BOOKS OF LEADING PRODUCERS.

The Commission's investigation of costs could not segregate the effect which the reduction in hours worked might have had from the effect of increased wages, but it has ascertained the total increase in direct labor costs from whatever cause. This section gives the results of the Commission's investigation and shows that the increase in the f. o. b. mine price of coal was not justified by net increases in the cost of production since 1913; though whether the prices themselves were reasonable or unreasonable, on the basis of the profit they yielded on the investment, remains to be determined by fuller investigation.

So far as separate data could readily be secured on the particular items of cost referred to in the foregoing section, the facts are shown. Further data on the effect of the 8-hour day are given in a later chapter (p. 91).

The books of 13 companies producing 79.2 per cent of the total commercial anthracite tonnage in 1916 were examined by the Commission. Of these, 11 were so-called railroad companies, with a production of 75.7 per cent, and 2 were independents, i. e., companies with no railroad affiliation, with a production of 3.5 per cent. The examination went into the cost of production and sales receipts for the same periods with a view to ascertaining the increase or decrease in costs, receipts, and margins.

Periods.—The periods covered were the calendar years 1913 and 1914, and from January to March, April to August, and September to December for the years 1915 and 1916. As the wage increase took effect April 1, 1916, it was necessary to compare figures prior to that date with those subsequent. The panic condition in the market began to take form in September, 1916, and figures were secured separately for the period from September to December so as to compare the panic period with April to August, 1916, and with September to December in the previous year.

Methods of compiling costs.—Costs as shown were taken from the companies' records, but not all of the items charged as costs were included by the Commission in the comparison. Some of these items were of a nature which would not have shown an increase had the records been kept in the same manner all during the period, and therefore could not be accepted as comparable. Others were items which probably were comparable but which could not be accepted without a more detailed analysis than was possible at this time. An instance of the first class is the practice by some companies of making no charge for depreciation, but in lieu of it charge all improvements to operating costs. It is manifest that if no improvements were made in one year and a good many in the next, the second year would show an increased cost where none existed, as the increased cost shown would be simply paying what were really deferred charges from previous periods. If provision were made for depreciation this would result in a regular charge each year instead of a fluctuating one.

An instance of the second class is selling expense, which includes degradation. This can not be accepted until the prices used as a basis in calculating degradation are known. If full selling prices are used, the figures can not be accepted, since an expected profit not realized is not an element of cost.

The Commission has accepted certain items of cost with a view to their comparability for succeeding periods, but without expressing a conclusion as to their absolute accuracy. For example, the depletion figures shown on the companies' books have been accepted as being comparable for the successive periods, but considerable study and revision would be necessary in order to obtain absolute accuracy of these items.

Costs, receipts, and margins, with increases therein.—The increase in the items accepted by the Commission as comparable are shown in the following table, which is based on fresh-mined coal only—the cost as well as the sales of the small proportion of washery coal recovered from the culm banks having been eliminated. In the items of cost included in general expenses there are some small amounts which a detailed analysis might show as properly chargeable against washery cost. However, as washery is a reclamation process, and the tonnage recovered is only a small proportion of the total (10 per cent for the highest company), these small amounts have been left in the cost of fresh-mined coal. A test of three companies shows that if these items were distributed on the basis of labor involved, the effect on the cost of fresh-mined coal would be less than 1 per cent.

TABLE 3.—*Costs, receipts, and margins, per gross ton at the mines, of fresh-mined anthracite, with increases or decreases by years 1913-1916, for 5 high-cost and 8 low-cost producers.*

NOTE.—It is emphasized that a large part of the general expenses "not accepted" are no doubt proper costs but are either not comparable as between the periods or require further analysis.

[(-) indicates decrease.]

13 COMPANIES.

	Year 1913.	Year 1914.	In- crease.	Year 1915.	In- crease.	Total in- crease.	9 months, 1915.	9 months, 1916.	In- crease.	1913- 1916 in- crease.
Labor.....	\$1.575	\$1.575		\$1.577	\$0.002	\$0.002	\$1.553	\$1.729	\$0.176	\$0.154
Supplies.....	.346	.319	-\$0.027	.306	-.013	-.040	.293	.364	.071	.018
General expenses (accepted).....	.328	.352	.024	.358	.006	.030	.345	.435	.090	.107
Total accepted cost.....	2.249	2.246	-.003	2.241	-.005	-.008	2.191	2.528	.237	.279
Receipts, all sizes.....	2.782	2.858	.076	2.823	-.035	.041	2.837	3.242	.405	.460
Margin over ac- cepted cost.....	.533	.612	.079	.582	-.030	.049	.646	.714	.068	.181
General expenses not accepted.....	.294	.322	.028	.326	.004	.032	.312	.374	.062	.080

5 HIGH-COST COMPANIES.

Receipts, all sizes.....	\$2.734	\$2.782	\$0.048	\$2.739	-\$0.043	\$0.005	\$2.749	\$3.182	\$0.433	\$0.448
Cost (accepted).....	2.400	2.408	.008	2.401	-.007	.001	2.356	2.732	.376	.332
Margin over accepted cost.....	.334	.374	.040	.338	-.036	.004	.393	.450	.057	.116
General expenses not accepted.....	.231	.253	.022	.237	-.016	.006	.239	.297	.058	.066

8 LOW-COST COMPANIES.

Receipts, all sizes.....	\$2.823	\$2.920	\$0.097	\$2.890	-\$0.030	\$0.067	\$2.907	\$3.292	\$0.385	\$0.469
Cost (accepted).....	2.130	2.129	-.001	2.126	-.003	-.004	2.077	2.383	.306	.253
Margin over accepted cost.....	.693	.791	.098	.764	-.027	.071	.830	.909	.079	.216
General expenses not accepted.....	.302	.341	.039	.397	.056	.095	.335	.394	.059	.092

HIGHEST-COST COMPANY.

Receipts, all sizes.....	\$2.898	\$2.928	\$0.030	\$2.889	-\$0.039	-\$0.009	\$2.917	\$3.336	\$0.419	\$0.438
Cost (accepted).....	2.440	2.516	.076	2.628	.112	.188	2.588	3.043	.455	.603
Margin over accepted cost.....	.458	.412	-.046	.261	-.151	-.197	.329	.293	-.036	-.165
General expenses not accepted.....	.354	.349	-.005	.273	-.076	-.081	.330	.400	.070	.046

LOWEST-COST COMPANY.

Receipts, all sizes.....	\$2.938	\$2.973	\$0.035	\$2.913	-\$0.060	-\$0.025	\$2.964	\$3.310	\$0.346	\$0.372
Cost (accepted).....	1.878	1.989	.111	1.769	-.220	-.109	1.711	1.933	.222	.055
Margin over accepted cost.....	1.060	.984	-.076	1.144	.160	.084	1.253	1.377	.124	.317
General expenses not accepted.....	.297	.226	-.071	.187	-.039	-.110	.204	.270	.066	-.027

The above table shows cost, receipts, margins, and increases per gross ton for all sizes of coal produced by 13 companies. The principal comparison to be made is between 1913 and the 9 months of 1916 following the wage agreement.

From 1913 to 1915 labor shows practically no increase, while supplies show a decrease of 4 cents. The increase in accepted items of general expense—which are superintendence, heat, light and power, taxes, royalty, depreciation, depletion, and injuries—show an increase of only 3 cents, so the total accepted cost from 1913 to 1915 shows a decrease of 0.8 cent. If all costs had been accepted, the net result would have been an increase of 2.4 cents in that period. Of this amount 1.6 cents represents the increase in Pennsylvania tonnage tax, which most of the companies charged into cost. This tax has not been paid. Hence the net increase, even accepting all costs, was only 0.8 cent, notwithstanding the fact that there was a decrease in production of over 3,000,000 tons, or 5.7 per cent. During the same period the receipts from all sizes of coal at the mine increased 3.8 cents, with the result that the margin over accepted items shows an increase of 4.6 cents and over all items, except the Pennsylvania tonnage tax, an increase of 3 cents.

The cost for the first three months of 1915 was higher than for the entire year, due largely to the low production in that period, which averaged 3,600,000 tons per month as against an average of 4,400,000 tons per month for the entire year. This results in the costs for the last nine months of 1915 showing a lower figure than the costs for the entire year.

The costs for the last nine months of 1913 were the same as for the entire year. As there was a variation in cost as between 1913, 1914, and 1915 of less than 1 cent, the 1913 figures may be considered as the average for the three years. Hence, the most significant and accurate comparison is between the last nine months of 1916 and the year 1913.

The costs for the last nine months of 1916 show an increase in all items over 1913. Labor increased 15.4 cents; supplies, 1.8 cents; and accepted general expense items, 10.7 cents. Included in general expense for 1916, in addition to the items above named, was provision for workmen's compensation, which amounted to an increase of 3.8 cents over the amount formerly charged for injuries. The next largest increase was in taxes, which amounted to 3.3 cents. The increase in other items was comparatively slight.

The unaccepted items of cost show an increase of 8 cents, of which 2.5 cents was Pennsylvania tonnage tax, 2.1 cents was selling expense, and 1 cent was extraordinary repairs and renewals.

The receipts from all sizes of coal show an increase of 46 cents per ton, which, against an increase of 27.9 cents in accepted costs, gives an increased margin of 18.1 cents. This increase would be as high as 10.1 cents even with the inclusion of all the unaccepted items, and omitting only the Pennsylvania tonnage tax the increase would still be 12.6 cents.

The five companies whose costs in 1916 were above the average show an increase in receipts of 44.8 cents, in accepted cost of 33.2 cents, an increase in margin over accepted costs of 11.6 cents. The eight companies whose cost was below the average in 1916 show an increase in receipts of 46.8 cents, in cost of 25.3 cents, and in margin over accepted cost of 21.5 cents. The fluctuation is still more marked as between the highest cost company and the lowest; the highest

showing a decrease in margin of 16.5 cents, while the lowest shows an increase of 31.7 cents.

Prices by sizes, f. o. b. mines.—The following table shows the average f. o. b. mine price received for each size by 12 leading companies, the data for the thirteenth company not being available by sizes. The wide range between the smaller or steam sizes and the larger or prepared sizes is the most significant fact brought out by this table. As will be seen in the table following this one, the percentage of prepared sizes is about 63 per cent, and these sizes are the ones on which the profit is made. The steam sizes in a normal market are all sold at a loss, and this loss must be made up on the prepared sizes before any profit on the output as a whole will be shown.

TABLE 4.—*Prices per gross ton received for various sizes of fresh-mined anthracite, f. o. b. mine, by 12 leading producers, 1913-1916.*

Size.	1913	1914	1915	January to March.		April to August.		September to December.		April to December.	
				1915	1916	1915	1916	1915	1916	1915	1916
Lump.....	\$3.018	\$3.043	\$3.060	\$2.984	\$3.229	\$3.030	\$3.475	\$3.143	\$3.666	\$3.086	\$3.567
Broken.....	2.949	3.013	3.030	3.008	3.108	3.007	3.366	3.000	3.493	3.035	3.423
Egg.....	3.454	3.513	3.479	3.536	3.726	3.335	3.724	3.661	4.083	3.465	3.887
Stove.....	3.591	3.733	3.623	3.704	3.817	3.421	3.917	3.806	4.238	3.602	4.093
Chestnut.....	3.834	3.895	3.883	3.977	4.102	3.646	4.050	4.047	4.459	3.859	4.272
Average prepared.....	3.581	3.642	3.628	3.693	3.838	3.431	3.855	3.800	4.243	3.607	4.045
Pea.....	2.174	2.199	2.131	2.189	2.215	2.080	2.394	2.133	2.769	2.111	2.594
Buckwheat.....	1.351	1.364	1.347	1.334	1.436	1.334	1.509	1.367	1.586	1.351	1.548
Rice.....	.829	.856	.834	.847	.918	.825	.918	.837	.966	.830	.942
Barley.....	.527	.524	.520	.514	.535	.515	.596	.525	.732	.520	.671
Boiler.....	.686	.678	.663	.697	.698	.654	.837	.649	.933	.653	.889
Screenings.....	.034	.036	.129	.340	.353	.074	.007	.071	.487	.072	.281
Average steam....	1.390	1.416	1.389	1.195	1.572	1.312	1.590	1.438	1.777	1.378	1.688
Average all sizes..	2.774	2.835	2.799	2.734	2.952	2.730	3.089	2.905	3.324	2.817	3.207

Percentage of sizes produced and sold.—The following table shows the percentage of each size of coal produced and sold during the years 1913 to 1916, inclusive. It also gives the same information for the periods January to March, April to August, and September to December, 1915 and 1916. It will be seen that the percentage of prepared sizes produced in 1916 showed a slight increase over 1913, so that no increase in average cost or decrease in average receipts can be asserted as due to this factor.

The production percentage was fairly constant during the four years, not only as regards the yearly averages, but also as regards the period averages in 1915 and 1916. The sales percentage was also nearly uniform as regards the yearly averages, but the period averages show more variation, and this variation applies to both 1915 and 1916. In the period from January to March the sales were less than the production, the difference being more marked in 1915 than in 1916, as in 1915 the sales were 90 per cent of the production, while in 1916 the sales aggregated 95 per cent. This was probably due to an attempt on the part of the retailers to stock up in anticipation of a strike. During the period April to August for both years the sales

of prepared sizes exceeded the production, while from September to December they were slightly less.

The heaviest use of steam sizes appears to be from January to March and the lightest from April to August, while during the period from September to December the sales were very close to the production.

In general the differences in the percentages between produced and sold is due to changes in stocks. In those periods in which much of the prepared sizes went into storage the percentages of such sizes sold was correspondingly smaller. It may be noted that the percentage sold of total prepared and total steam sizes was the same in September to December, 1916, as in 1913, though the percentages among the sizes varied.

TABLE 5.—Percentage of sizes of fresh-mined anthracite produced and sold by 12 leading producers, 1913-1916.

Size.	1913		1914		1915		1916	
	Produced.	Sold.	Produced.	Sold.	Produced.	Sold.	Produced.	Sold.
Lump.....	00.7	00.5	00.3	00.3	00.3	00.2	00.3	00.2
Broken.....	06.7	06.8	06.9	06.5	06.8	06.7	07.4	06.5
Egg.....	12.6	12.3	11.9	12.3	11.8	12.5	12.4	12.8
Stove.....	19.0	19.8	20.6	21.0	20.9	20.7	20.8	20.2
Chestnut.....	24.3	23.4	23.2	23.5	23.2	23.0	22.7	23.7
Total.....	63.3	62.8	62.9	63.6	63.0	63.1	63.6	63.4
Pea.....	12.4	11.7	12.8	12.0	12.9	12.4	12.1	13.3
Buckwheat.....	13.2	13.7	13.2	12.8	13.4	12.9	13.7	13.0
Rice.....	05.7	05.8	05.4	05.2	05.2	05.5	04.3	04.4
Barley.....	03.2	03.2	03.4	03.3	03.2	03.3	02.6	02.3
Boiler.....	02.1	01.9	02.2	02.3	02.2	01.9	03.4	02.6
Screenings.....	00.1	00.9	00.1	00.8	00.1	00.9	00.3	01.0
Total.....	36.7	37.2	37.1	36.4	37.0	36.9	36.4	36.6

Size.	January to March.				April to August.				September to December.			
	1915		1916		1915		1916		1915		1916	
	Pro-duced.	Sold.	Pro-duced.	Sold.	Pro-duced.	Sold.	Pro-duced.	Sold.	Pro-duced.	Sold.	Pro-duced.	Sold.
Lump.....	00.3	00.3	00.3	00.3	00.2	00.2	00.2	00.2	00.3	00.2	00.3	00.2
Broken.....	07.1	06.6	07.6	05.9	06.4	06.9	07.1	07.4	07.2	06.4	07.6	06.1
Egg.....	12.2	11.7	11.8	11.9	12.4	15.2	12.1	14.5	11.0	10.2	13.2	11.9
Stove.....	20.7	17.5	21.4	19.3	23.5	22.7	21.2	22.3	21.3	20.4	20.3	18.9
Chestnut.....	24.0	21.7	22.8	23.5	23.1	21.9	22.4	21.8	22.9	24.9	22.3	25.7
Total.....	64.3	57.8	63.9	60.9	62.6	66.9	63.0	66.2	62.7	62.1	63.7	62.8
Pea.....	13.3	14.4	12.6	16.3	12.8	09.7	12.5	11.2	12.7	14.0	11.5	12.8
Buckwheat.....	13.1	15.5	14.1	12.8	13.5	11.9	13.5	13.0	13.6	12.5	13.8	13.3
Rice.....	04.0	05.4	04.7	04.4	05.5	05.5	04.0	04.3	05.6	05.6	04.3	04.6
Barley.....	02.8	03.8	03.2	03.3	03.1	03.1	01.9	01.7	03.4	03.3	02.9	02.1
Boiler.....	02.4	02.2	01.4	01.4	02.4	02.1	04.8	02.7	01.9	01.6	03.3	03.4
Screenings.....	00.1	00.9	00.1	00.9	00.1	00.8	00.3	00.9	00.1	00.9	00.5	01.0
Total.....	35.7	42.2	36.1	39.1	37.4	33.1	37.0	33.8	37.3	37.9	36.3	37.2

Increases in price, cost, and margin, by sizes.—The following table shows the increases in price, cost, and margin for each size coal. The figures in this table are for 12 companies only, as the records of one company were kept in such a way that the figures by sizes could

not be obtained. As the cost increases are based on accepted costs only, the increases in margins would be reduced, roughly, by the increase in unaccepted items, as shown above in the first table in this section for all 13 companies.

TABLE 6.—*Increases per gross ton in prices, costs, and margins of fresh-mined anthracite only, by sizes, for 12 leading producers, 1913–1916.*

[Figures in italics indicate decreases.]

Size.	1914 over 1913.		1915 over 1914.		1915 over 1913.		January to March.					
							1915 over 1914.		1916 over 1915.		1916 over 1913.	
	Price.	Margin.	Price.	Margin.	Price.	Margin.	Price.	Margin.	Price.	Margin.	Price.	Margin.
Lump.....	\$0.025	\$0.019	\$0.017	\$0.026	\$0.042	\$0.045	\$0.059	\$0.220	\$0.245	\$0.308	\$0.211	\$0.107
Broken.....	.064	.058	.017	.026	.081	.084	.005	.166	.100	.163	.159	.055
Egg.....	.059	.053	.034	.025	.025	.028	.023	.138	.190	.253	.272	.168
Stove.....	.042	.036	.010	.001	.032	.035	.071	.090	.113	.176	.226	.122
Nut.....	.061	.055	.012	.003	.049	.052	.082	.079	.125	.188	.268	.164
Average (prepared)...	.061	.055	.014	.005	.047	.050	.051	.110	.145	.208	.257	.153
Pea.....	.025	.019	.068	.059	.043	.040	.010	.171	.026	.089	.041	.063
Buckwheat.....	.013	.007	.017	.008	.004	.001	.030	.191	.102	.165	.085	.019
Rice.....	.027	.021	.022	.013	.005	.008	.009	.170	.071	.134	.089	.015
Barley.....	.003	.009	.004	.005	.007	.004	.010	.171	.021	.084	.008	.096
Boiler.....	.008	.014	.015	.006	.023	.020	.019	.142	.001	.064	.012	.092
Screenings.....	.070	.064	.165	.156	.095	.092	.376	.537	.693	.756	.387	.283
Average (steam).....	.026	.020	.027	.018	.001	.002	.221	.382	.377	.440	.182	.078
Average (prepared and steam).....	.061	.055	.036	.027	.025	.028	.101	.262	.218	.281	.178	.074
Cost accepted ¹.....	.006		.009		.003		.161		.063		.104	

Size.	April to August.						September to December.					
	1915 over 1914.		1916 over 1915.		1916 over 1913.		1915 over 1914.		1916 over 1915.		1916 over 1913.	
	Price.	Margin.	Price.	Margin.	Price.	Margin.	Price.	Margin.	Price.	Margin.	Price.	Margin.
Lump.....	\$0.013	\$0.035	\$0.445	\$0.104	\$0.457	\$0.158	\$0.100	\$0.161	\$0.523	\$0.173	\$0.648	\$0.353
Broken.....	.006	.042	.359	.018	.417	.118	.053	.114	.427	.077	.544	.249
Egg.....	.178	.130	.389	.048	.270	.029	.148	.209	.422	.072	.629	.334
Stove.....	.212	.164	.496	.155	.326	.027	.173	.234	.492	.142	.707	.412
Nut.....	.249	.201	.404	.063	.216	.033	.152	.213	.412	.062	.625	.330
Average (prepared)...	.211	.163	.424	.083	.274	.025	.158	.219	.443	.093	.662	.367
Pea.....	.119	.071	.314	.027	.220	.079	.066	.005	.636	.286	.595	.300
Buckwheat.....	.030	.018	.175	.166	.158	.141	.003	.064	.219	.131	.235	.060
Rice.....	.031	.017	.093	.248	.089	.210	.019	.042	.129	.221	.137	.158
Barley.....	.009	.039	.081	.260	.069	.230	.001	.082	.207	.143	.205	.090
Boiler.....	.024	.024	.183	.153	.151	.148	.029	.032	.284	.066	.247	.043
Screenings.....	.038	.086	.067	.408	.041	.258	.107	.045	.558	.208	.521	.226
Average (steam).....	.104	.056	.278	.063	.200	.099	.022	.083	.339	.011	.387	.092
Average (prepared and steam).....	.105	.057	.339	.018	.315	.016	.070	.131	.419	.069	.550	.255
Cost accepted ¹.....	.048		.341		.299		.061		.350		.295	

¹ For approximate effect allowance of "costs not accepted as comparable" would have on the increases in margins shown in this table, see the first paragraphs of text discussion preceding table.

TABLE 6.—*Increases per gross ton in prices, costs, and margins, etc.—Continued.*

Size.	April to December.					
	1915 over 1914.		1916 over 1915.		1916 over 1913.	
	Price.	Margin.	Price.	Margin.	Price.	Margin.
Lump.....	\$0.043	\$0.096	\$0.481	\$0.136	\$0.549	\$0.251
Broken.....	.022	.075	.388	.043	.474	.176
Egg.....	.048	.005	.422	.077	.433	.135
Stove.....	.031	.022	.491	.146	.502	.204
Nut.....	.036	.017	.413	.068	.438	.140
Average (prepared).....	.035	.018	.438	.093	.464	.166
Pea.....	.088	.035	.483	.138	.420	.122
Buckwheat.....	.013	.040	.197	.148	.197	.101
Rice.....	.026	.027	.112	.233	.113	.185
Barley.....	.004	.049	.151	.194	.144	.154
Boiler.....	.025	.028	.236	.109	.203	.095
Screenings.....	.036	.089	.209	.136	.315	.017
Average (steam).....	.038	.015	.310	.035	.298	.000
Average (prepared and steam).....	.018	.035	.390	.045	.433	.135
Cost accepted ¹.....	.053		.345		.298	

¹ For approximate effect allowance of "costs not accepted as comparable" would have on the increases in margins shown in this table, see the first paragraphs of text discussion preceding table.

The steam sizes are all normally sold at less than cost, and the loss on them is borne by the prepared sizes. Consequently any increase in margin shown in the table is really a decrease in this loss, which, however, has the same effect on the total realization figures as an increase in margin.

The margin of all the steam sizes during the period from April to December, 1916, showed no increase over the year 1913. This was due to the fact that the steam sizes come in competition with bituminous coal, and the price is consequently held down to somewhere near the bituminous price. During the period from April to August, 1916, the price increase was not enough to offset the cost increase, and the margin therefore showed an actual decrease, but in September the price of steam sizes began to rise, following the rise in bituminous, thus offsetting the decrease of the earlier period. In 1917 the price of steam sizes has gone still higher.

Among the steam sizes pea shows an increase of 12.2 cents as against no increase on all steam sizes. This was due to the fact that this size is beginning to come into domestic use and, although classed as a steam size in this table, is now often considered a prepared size.

The margins on the prepared sizes, taken as a whole, also showed a decrease in the period from April to August, due to the discounts on these sizes allowed during these months. From September to December the conditions were reversed, and a very appreciable increase was shown. This was due to the higher prices received by some companies during this period. These prices were high enough to show an increase in margin for the last four months of 1916 over the year 1913 of 36.7 cents and an average increase for the nine months of 16.6 cents.

Practically all the increase in margin took place in 1916, as from 1913 to 1915 the increase in margin was only 5 cents on prepared sizes and only 0.2 cent on steam sizes.

While the percentage of prepared and steam sizes produced is fairly constant, the percentage of each kind sold varies from time to time, due to stored coal. This variation prevents the total average from having any real significance, and consequently this figure is not shown.

CHAPTER IV.

HIGH PRICES OF ANTHRACITE IN FALL AND WINTER OF 1916-17.

SECTION 1. INVESTIGATION UNDERTAKEN IN RESPONSE TO GENERAL PUBLIC DEMAND.

The public demand for an investigation of the causes of the extremely high prices of anthracite during the fall crisis was widespread and insistent. Since anthracite is mainly used as a domestic fuel and is a necessity to many thousands of householders in the territory served by the mines, and since the high prices caused great distress, especially among the poorer people, the Commission felt it to be its duty to undertake a rapid survey of the market conditions to determine the causes thereof and the responsibility therefor, so far as it lay in the anthracite coal trade itself.

In this the Commission followed the spirit of the Senate resolution which inquired regarding the price increases made prior to the adoption of the resolution in June—increases not nearly so marked as those that developed in the fall and winter following.

Recent Federal, State, municipal, and civic investigations of the anthracite and bituminous coal situation.—In an effort to get at the causes of the coal shortage and of the unusual conditions in the coal market, as well as to remedy them, if possible, numerous investigations have been undertaken in various parts of the country. Federal, State, and municipal authorities, as well as civic organizations, instituted inquiries on a more or less elaborate scale into the coal situation that confronted them, both as regards anthracite and bituminous coal.

On the part of the Federal Government the Department of Justice conducted a nation-wide investigation with special reference to any possible conspiracies in restraint of interstate commerce. The Interstate Commerce Commission held hearings at Louisville, Ky., in November with regard to the alleged shortage of car supply. A report was subsequently issued, viz, Interstate Commerce Commission Order No. 9284, Car Supply Investigation, submitted December 28, 1916, decided January 18, 1917. United States attorneys in Boston, New York, Chicago, and in other important centers conducted investigations into the coal situation in their respective territories. Grand juries in New York, Niagara Falls, Cleveland, in southern Michigan, and elsewhere, took under consideration charges laid before them in this connection.

The State authorities of several States concerned themselves with the coal situation, among them Pennsylvania, Massachusetts, Ohio,

Indiana, Illinois, Iowa, Minnesota, and Kansas. In this connection bills were introduced in the Legislatures of Illinois, Iowa, Minnesota, and Kansas. The Pennsylvania State Anthracite Commission appointed by the governor of Pennsylvania, pursuant to a joint resolution of June 15, 1915, of the legislature of that State, to investigate the increase in the cost of anthracite coal in Pennsylvania, issued a report in January, 1917. In Massachusetts a commission on the cost of living, appointed by the governor, made a report on the cost of anthracite in that State with recommendations for Federal, State, and municipal action. Public utilities commissions in Illinois, Ohio, and Indiana investigated the car shortage and traffic congestion at different points within those States, and in a number of cases adopted stringent measures to regulate the intrastate traffic within their jurisdiction. State attorneys in Kansas, Indiana, and in some other States were active in a similar direction. In North Dakota a plan was considered to organize a State coal board to procure a proper distribution of coal.

Efforts were made by municipal authorities in large and small cities in many States to remedy the coal situation. In many cases the remedy offered consisted in municipal coal yards or municipally leased or owned coal mines. It appears that this was the case particularly in Indiana, where municipal coal yards were planned or put into operation in Muncie, Evansville, Terre Haute, Huntington, Anderson, and Indianapolis. In Michigan similar plans were considered, and put into effect in some cases, at Highland Park (Detroit), Bay City, Kalamazoo, and Lansing. Other cities of this class were Cleveland, Ohio; Chicago and Granite City, Ill.; Niagara Falls, N. Y.; Hartford, Conn.; Lewiston and Auburn, Me. In several instances city councils petitioned State legislatures to pass bills authorizing cities of a certain class to establish and maintain fuel yards, and to buy and deal in fuel. Resolutions to the same effect were adopted at a conference of representatives of 40 Illinois cities and towns held at Springfield, Ill., in December. During November inquiries into the coal situation in New York City were made by the police department, the district attorney, and the commissioner of accounts.

A committee representing the Greater Dayton Association, of Dayton, Ohio, investigated the coal situation in that city and issued a report on coal prices on December 2. A municipal inquiry was also made at Cincinnati.

The above is an incomplete account of the many investigations and public activities entered upon last winter and this spring on account of the high price of fuel.

Extent and character of material secured by the Commission.—In addition to general information and statistics relative to the causes of the high prices, the Commission secured from the books of operators, jobbers, and retailers sufficient data to establish the exact or approximate gross margins on which their business was conducted during the months from September to December, 1916.

In the case of all the railroad coal operators the cost of production, and the amount received for each size of coal, were secured for this period. In the case of independent operators, whose aggregate

production is only a small proportion of the total, only the more important of those complained of as selling premium coal were covered. For some of these both costs and sales for the period were taken, for others only the sales.

From the books of jobbers and wholesalers were taken the purchase price of coal bought each month and the sale price of coal sold each month, and from these the gross margin for the month was calculated, allowance being made where necessary for the cost of tonnages carried over from previous months. In the case of most jobbers the margins on each separate size of coal were not calculated, but all sizes were lumped together since it was much quicker to secure the information in this form and since the differences between the margins on the separate sizes were understood to be relatively slight.

From the retailers were secured the tonnage of each size of anthracite purchased and the amount paid, by months; and selected typical selling prices per ton, by months, for each size and each principal class of business handled by the dealer, e. g., household sales, contract sales, yard sales, etc. From these items, with allowance for inventories, the gross margin by months could be calculated. The method of selecting typical prices, instead of taking the total sales, was necessary because very few retailers have in summarized form the average price received for each size of coal, and still fewer have this information summarized by classes of business. For the Commission's agents to have compiled totals from the original sales slips would have required an inordinate amount of time, hence the method of inspecting these sales records and selecting typical prices was the only feasible plan.

In a few instances costs of doing business, including shrinkage and degradation, were secured from representative retailers.

SECTION 2. GENERAL CAUSES OF HIGH-PRICE CONDITIONS.

In a normal coal year, as already explained, the independent operators who sell in the open market are likely to sell at 25 cents or more below circular during the summer months, and jobbers and retail dealers who are looking for bargains buy from them. In the winter-time, on the other hand, the independents aim to sell above circular. Dealers who are "shopping around" for cheap coal during the summer usually find that the railroad coal companies refuse to sell them at the time of sharp demand in winter. They are often compelled, therefore, to buy from independents at a premium, while their competitors with good "company connections" get the railroad coal at the regular price. The same condition obtained in 1916, except that unusual circumstances intensified the situation. Even the steady "company" dealers were often unable to get coal from their regular source last fall, and were therefore compelled to resort to paying high premiums in competition for coal in the hands of independent producers or jobbers.

Increase of real demand for anthracite.—In order to judge the anthracite situation in 1916 correctly it is necessary in considering the factor of demand to distinguish between the increase in normal

demand and the increase in demand essentially psychological and produced by artificial means. The increase in legitimate demand was an underlying cause, the effect of which on the market was inevitable. The panic demand of the later months of 1916, fed by newspaper predictions of coal famine, simply made a bad matter worse, heightening a crisis that might by prudence have been modified. That the panic demand was artificial and that much of the difficulty experienced could have been avoided is shown in the further treatment of this subject on page 110.

The normal demand for coal of all kinds showed a larger increase in 1916 than in any one year for the past 20. It has been estimated by trade authorities that the increased demand for all coal was fully 20 per cent the country over.

While, so far as manufacturing plants are concerned, demand has increased primarily for bituminous, wage earners, farmers, and householders generally have increased their calls for anthracite. Moreover, the shifting of population, due to the attraction of higher wages, no doubt brought into the area of anthracite consumption many who had before lived in communities where wood or bituminous coal are the principal fuels. The great increases in the population of New York, Bridgeport, Schenectady, and other places in the East are examples.¹ In the Northwest many farmers who formerly used wood as fuel now burn hard coal. Bringing new lands under cultivation has also had its effect. Near Ashland, Wis., for instance, where timber is gradually disappearing and the cut-over lands are being settled, the increase in population is reflected in the growing demand for domestic sizes of anthracite.

The greater consumption of large sizes of anthracite by gas and carbon plants and by railroads has caused an increase in demand for these sizes. This is due largely to the fact that coal which formerly came in competition with anthracite coal has been diverted to other uses. Many gas plants which in the past have been making coke as a by-product, some in competition with anthracite, have very materially curtailed their output because of the high price of soft coal. Large manufacturing plants which use coke in connection with their manufacturing processes have turned to anthracite on account of the shortage in coke. These industries can not use bituminous coal. Public utilities in some parts of the country have been affected to a considerable extent by the shortage of coke and have substituted anthracite for it. An unprecedented industrial activity created a growing demand for steam sizes by manufacturing plants regularly using anthracite. A large industrial concern in Buffalo, for instance, consumed from April to December, 1916, 18,500 tons of anthracite more than during the same period in the preceding year.

Another case at hand is a large plant at Niagara Falls, which used 30 per cent more anthracite in 1916 than in 1915. A number of other plants were forced into the open market to meet their need in anthracite over and above the quantity contracted for.

On account of the prevailing scarcity of bituminous coal throughout 1916 many manufacturing plants in the East, as well as in the

¹ Testimony of W. H. Williams before the Massachusetts commission on the high cost of living.

Middle West, were obliged to substitute anthracite, chiefly steam sizes, for bituminous. In certain sections in Maine a number of users of bituminous coal, refusing to pay the prices demanded for soft coal, substituted pea coal, which they could buy about \$2 per ton cheaper. This was done also in Detroit and Chicago. The fact that the users of anthracite for steam purposes were willing to pay much more for pea and buckwheat than the domestic consumer created an abnormal situation, especially in New York, where retail dealers reported that they were not able to meet the demand of their regular trade in pea, buckwheat, and rice. Many former users of steam coal burned chestnut in their domestic furnaces instead of pea and buckwheat. The municipal utilities, hotels, and apartment houses in the East are large consumers of steam sizes, and the demand from these interests grows rapidly. One selling agency estimates the increase in annual consumption of these sizes in New York City alone at from 500,000 to 750,000 tons during the last five years.

Anthracite is also beginning to be used in the form of powdered fuel, mixed with bituminous, and forced into the fire box by a mechanical device. This has been adopted by some industrial plants, and experiments are being made for its use in railroad engines.

In Ohio and in parts of Pennsylvania and New York a shortage of natural gas brought on an extra demand for anthracite from household and industrial consumers. In some cases the price of natural gas was advanced to such an extent, because the flow from the wells is diminishing, that it became too expensive for fuel purposes, and consumers turned to anthracite as a substitute. In other cases natural gas distributing companies either curtailed or completely shut off the gas supply from hundreds of manufacturing plants which had been using it as fuel for years and forced them to substitute either bituminous coal or anthracite, taking just that much more coal out of the market and increasing the demand materially.

Increased consumption of coal by steel, cotton, and munition industries.—The great expansion of industrial activity in the steel, the cotton textile, and the munition industries accounts for a material increase in the consumption and demand for bituminous coal, which in turn has indirectly placed an added demand on the anthracite supply by industries that could substitute anthracite when bituminous could not be had or when the price of bituminous was higher than that of anthracite. The increased production of steel in 1916 over 1915 has been estimated at 10,000,000 tons.¹ On the basis of 4 tons of bituminous coal said to be necessary on the average to produce 1 ton of steel products, the increased output of steel in 1916 would indicate an increased demand of 40,000,000 tons of bituminous coal in 1916 for the steel industry.

The cotton mills in the Carolinas and in New England have increased their output far above the normal, and the extra demand for coal from these sources during 1916 is estimated to have been close to 4,000,000 tons.² New munitions plants and the greatly increased output of old plants have taken additional large quantities of coal out of the market. One new plant in Virginia—Hopewell—

¹ The Iron Age, Jan. 4, 1917, p. 108,

² The Black Diamond, Nov. 1, 1916.

under existing conditions is consuming the total production of two moderate-sized eastern mines.¹

Increased consumption of coal by railroads.—It is impossible to appraise the coal situation accurately, particularly in the Eastern States, without taking into account the increased consumption of coal by the railroads due to the enormous demand for transportation services. It has been estimated that the demand for railroad fuel has increased about 30 per cent, due chiefly to the extra mileage, to the wastefulness of the large number of old locomotives forced into service, and to an increased demand for fuel needed for new locomotives. The railroads in normal times take 25 per cent of the coal produced each year. This means that they have been using about 125,000,000 to 135,000,000 tons of coal per year. If they are using 30 per cent more this year, their current requirements call for at least 175,000,000 tons of coal, or an increase of 40,000,000 tons.² The bulk of this increase was in bituminous coal, but in many cases anthracite was substituted.

Supply available for market.—Over against this increased demand for fuel, especially for industrial purposes, which was real in character and which affected anthracite to a considerable extent, the supply of anthracite was only slightly less than in previous seasons. The slight shortage, however, accompanied by pressure from industrial users, had marked effects.

To confine the figures to the coal season under discussion, the period beginning April 1 is taken, and the supply calculated for the nine months from April to December, inclusive. The nine-month period is here used for comparison because the detailed material gathered in the investigation of prices, etc., covered only the period up to December 31, 1916. On page 57 above the production and storage figures are given for the entire coal year 1916-17.

The method of the computation is to add to the tonnage in storage April 1 the quantity shipped from the mines by the initial anthracite carriers during the nine months, including shipments to storage, and to subtract from this total the tonnage in storage on December 31. This, with allowance for exports, will give the supply available for market in the United States.

The following table shows a comparison of these items and of the net supply for the nine months for the years 1913 to 1916, inclusive:

¹ The Black Diamond, Nov. 4, 1916, p. 385.

² The Black Diamond, Nov. 4, 1916, p. 386.

TABLE 7.—*Supply of anthracite available for market, April to December, 1913-1916.*

[Roman figures in percentage column indicate increase; italic figures indicate decrease.]

Gross tons.	1913.	1914.	In-crease or de-crease over 1913.	1915.	In-crease or de-crease over 1914.	Average, 1913-1915.	1916.	In-crease or de-crease over 1915.	In-crease or de-crease over average of 1913-1915.
In storage by producers, Apr. 1 ¹ .	<i>Tons.</i> 3,891,711	<i>Tons.</i> 5,223,844	<i>Per ct.</i> 34.2	<i>Tons.</i> 7,406,502	<i>Per ct.</i> 41.8	<i>Tons.</i> 5,507,352	<i>Tons.</i> 4,585,906	<i>Per ct.</i> 58.1	<i>Per ct.</i> 16.7
Sales locally at mines ²	1,198,268	1,282,248	7.0	1,247,780	2.7	1,242,765	1,037,400	16.9	16.5
Shipments from mines, including shipments to storage, Apr. 1 to Dec. 31 ³	52,749,193	55,280,872	4.8	53,624,969	3.0	53,885,011	49,668,357	7.4	7.8
Subtotal.....	57,839,172	61,786,964	6.8	62,279,251	.8	60,635,128	55,291,663	11.2	8.8
Deduct: In storage by producers, Dec. 31.....	6,573,697	8,024,915	2.2	8,265,270	3.0	7,621,294	2,824,945	65.8	62.9
Total available for all markets.....	51,265,475	53,762,049	4.9	54,013,981	.5	53,013,834	52,466,718	2.9	1.0
Deduct: Exports.....	3,328,802	3,312,545	.5	3,046,657	8.0	3,229,335	3,282,513	7.7	1.6
Total available for United States markets ⁴	47,936,673	50,449,504	5.2	50,967,324	1.0	49,784,499	49,184,205	3.5	1.2

¹ Includes coal in transit to storage.² Estimated.³ Excluding shipments from Bernice basin and from river dredge operations. The total Bernice and river dredge production was 665,993 tons in 1915 and 650,000 tons in 1916. A considerable proportion of this is consumed locally.⁴ Excluding items in note 3 and coal used for railroad fuel.

From the foregoing table it appears that the supply of anthracite in 1916 from April through December, although greater by 1,247,532 tons, or 2.6 per cent, than the supply for the same period in 1913, was 3.5 per cent less than that for this period in 1915, and 1.2 per cent less than the average of 1913, 1914, and 1915 for the period. The increase over 1913 was due to the comparatively small tonnage in storage on April 1, 1913, amounting to only 3,891,711 tons, while the amount in storage on the same day in 1916 was 4,585,906 tons, an increase of 18 per cent over 1913. The actual commercial shipments from the mines in the 1913 period exceeded those in the 1916 period by 5.8 per cent.

Because of the diversity in the general price policy followed by the railroad coal companies and that followed by the independent operators, it is important to consider the proportion of the supply handled by each of these two classes. The total sales of the railroad coal companies for the last nine months of 1915 (exclusive of sales to each other) were 42,960,826 gross tons, and for the last nine months of 1916 were 42,383,095 tons. Subtracting these quantities from the totals of coal marketed as shown for these periods in the above table, it appears that the tonnage sold on the market by all the inde-

pendent operators from April to December, 1915, was approximately 11,053,155 gross tons, or 20.4 per cent of the total, and for the corresponding months of 1916 was approximately 10,083,623 tons, or 19.2 per cent of the total.

These results indicate that while the quantity of coal furnished to the market by the railroad coal companies decreased 1.3 per cent for the first nine months of the past coal year, the quantity furnished by the independents decreased 8.8 per cent.

The geographical location of the tonnage of stored coal on hand on April 1 and on December 31 for the years 1913, 1914, 1915, and 1916, was as follows, in gross tons:

TABLE 8.—*Geographical location and gross tons of stored anthracite on hand, April 1 and December 31, 1913-1916.*

[Increases are in roman figures: decreases in *italic*.]

	In or at the mines.	Between the mines and tide-water.	At tide-water ports.	At interior points west of mines.	In New England.	Other.	Total.
<i>Apr. 1.</i>							
1913.....	148,887	1,363,334	900,484	1,102,023	112,030	264,953	3,891,711
1914.....	287,931	1,670,106	981,329	1,840,077	148,691	295,710	5,223,844
Increase or decrease from 1913...	139,044	306,772	80,845	738,054	36,661	30,757	1,332,133
Per cent.....	93.4	22.5	9.0	67.0	32.7	11.6	34.2
1915.....	539,870	2,902,737	1,194,712	2,108,430	216,492	444,261	7,406,502
Increase or decrease from 1914...	251,939	1,232,631	213,383	268,353	67,801	148,551	2,182,656
Per cent.....	87.5	73.8	21.7	14.6	45.6	50.2	41.8
1916.....	486,880	1,576,325	570,865	1,485,524	35,440	430,872	4,585,906
Increase or decrease from 1915...	<i>52,990</i>	<i>1,326,412</i>	<i>623,847</i>	<i>622,006</i>	<i>181,052</i>	<i>13,369</i>	<i>2,820,596</i>
Per cent.....	<i>9.8</i>	<i>45.7</i>	<i>52.2</i>	<i>29.5</i>	<i>83.6</i>	<i>3.0</i>	<i>38.1</i>
1913-1915 average.....	325,563	1,978,726	1,025,508	1,683,510	159,071	334,975	5,507,353
1916 increase or decrease from average.....	161,317	<i>402,401</i>	<i>454,643</i>	<i>197,986</i>	<i>123,631</i>	95,897	921,447
Per cent.....	49.6	<i>20.3</i>	<i>44.3</i>	<i>11.8</i>	<i>77.7</i>	28.6	<i>16.7</i>
<i>Dec. 31.</i>							
1913.....	493,861	2,443,588	702,532	2,620,216	113,354	200,146	6,573,697
1914.....	625,075	3,389,470	1,036,037	2,594,300	145,128	234,905	8,024,915
Increase or decrease from 1913...	131,214	945,882	333,505	<i>25,916</i>	31,774	34,759	1,451,218
Per cent.....	26.6	38.7	47.5	<i>1.0</i>	28.0	17.4	<i>22.1</i>
1915.....	773,076	3,269,342	806,058	2,654,555	101,032	661,207	8,265,270
Increase or decrease from 1914...	148,001	<i>120,128</i>	<i>239,979</i>	60,255	<i>44,096</i>	426,302	240,355
Per cent.....	23.7	<i>3.5</i>	<i>22.2</i>	2.3	<i>30.4</i>	181.4	<i>3.0</i>
1916.....	193,908	993,998	192,065	1,171,266	21,395	252,313	2,824,945
Increase or decrease from 1915...	<i>579,168</i>	<i>2,275,344</i>	<i>613,993</i>	<i>1,483,289</i>	<i>79,637</i>	<i>408,894</i>	<i>5,440,325</i>
Per cent.....	<i>74.9</i>	<i>69.6</i>	<i>76.2</i>	<i>55.9</i>	<i>78.8</i>	<i>61.8</i>	<i>65.8</i>
1913-1915 average.....	630,671	3,034,133	848,209	2,623,024	119,838	365,419	7,621,294
1916 increase or decrease from average.....	<i>436,763</i>	<i>2,040,135</i>	<i>656,144</i>	<i>1,451,758</i>	<i>98,443</i>	<i>113,106</i>	<i>4,796,349</i>
Per cent.....	<i>69.3</i>	<i>67.2</i>	<i>77.4</i>	<i>55.3</i>	<i>82.1</i>	<i>31.0</i>	<i>62.9</i>

The movement of storage coal shown comparatively for the nine months' period in each year, by location of storage points, is indicated by the following:

TABLE 9.—*Movement of storage anthracite shown comparatively by location of storage points, for 9 months of each year, 1913-1916.*

	In or at the mines.	Between the mines and tide water.	At tide-water ports.	At interior points west of mines.	In New England.	Other.	Total.
Apr. 1, 1913.....	148,887	1,363,334	900,484	1,102,023	112,030	264,953	3,891,711
Dec. 31, 1913.....	493,861	2,443,588	702,532	2,620,216	113,354	290,146	6,573,697
Net movement from storage.....			197,952			64,807	
Per cent.....			22.0			24.5	
Apr. 1, 1914.....	287,931	1,670,106	981,329	1,840,077	148,691	295,710	5,223,844
Dec. 31, 1914.....	625,075	3,389,470	1,036,037	2,594,300	145,128	234,905	8,024,915
Net movement from storage.....					3,563	60,805	
Per cent.....					2.4	20.6	
Apr. 1, 1915.....	539,870	2,902,737	1,194,712	2,108,430	216,492	444,261	7,406,562
Dec. 31, 1915.....	773,076	3,269,342	806,058	2,654,555	101,032	661,207	8,265,270
Net movement from storage.....			388,654		115,460		
Per cent.....			32.5		53.3		
Apr. 1, 1916.....	486,880	1,576,325	570,865	1,485,524	35,440	430,872	4,585,906
Dec. 31, 1916.....	193,908	993,998	192,065	1,171,266	21,395	252,313	2,824,945
Net movement from storage.....	292,972	582,327	378,800	314,258	14,045	178,559	1,760,961
Per cent.....	60.2	36.9	66.4	21.2	39.6	41.4	38.4

Because of the seasonal character of the demand and because of the special market conditions that developed in the fall of 1916, it is desirable to analyze the aggregate statement given above of the supply marketed by railroad coal companies. The distribution, by months and by periods, of the tonnage sold by them from April to December, 1915 and 1916, was as follows:

(For 7 of the 10 companies the figures are given for each month. For the remaining 3 companies only the figures for each period were available.)

TABLE 10.—*Distribution, by months and by periods, of anthracite sold from April to December, 1915 and 1916.*

	Sales from current production.		Sales from storage.		Tonnage added to storage.		Total sales.	
	1915	1916	1915	1916	1915	1916	1915	1916
Total for 7 companies by months—								
April.....	3,159,392	2,013,076	597,190	40,077	.....	.....	3,756,582	2,053,153
May.....	2,372,933	2,207,220	.....	100,830	261,871	.....	2,372,903	2,308,050
June.....	2,031,639	2,278,917	.....	.....	379,691	294,873	2,031,639	2,278,917
July.....	1,916,564	2,013,068	.....	.....	523,847	389,238	1,916,564	2,013,068
August.....	1,968,217	2,239,951	.....	.....	459,020	138,760	1,968,217	2,289,951
Total of 7 companies.....	11,448,765	10,807,232	597,190	140,907	1,624,429	822,871	12,045,955	10,948,139
Total of 3 companies, April-August, inclusive.....	8,704,077	8,600,054	569,542	172,495	1,673,380	758,659	9,273,619	8,772,549
Total of all companies, April-August, inclusive.....	20,152,842	19,407,286	1,166,732	313,402	3,302,809	1,581,530	21,319,574	19,720,688
Total for 7 companies by months—								
September.....	2,203,649	2,432,812	.....	285,428	335,444	.....	2,203,649	2,713,240
October.....	3,183,974	2,644,352	191,356	624,030	.....	.....	3,375,330	3,268,432
November.....	3,094,921	2,714,232	430,388	600,711	.....	.....	3,525,309	3,314,943
December.....	2,996,862	2,604,033	704,893	553,935	.....	.....	3,701,755	3,157,968
Total of 7 companies, September-December, inclusive.....	11,479,406	10,395,429	1,326,637	2,064,154	335,444	.....	12,806,043	12,459,583
Total of 3 companies, September-December, inclusive.....	8,034,051	9,258,274	801,153	944,620	396,718	.....	8,835,209	10,202,824
Total of all companies, September-December, inclusive.....	19,513,457	19,653,633	2,127,795	3,008,774	732,162	.....	21,641,252	22,662,407
Total of 7 companies, April-December, inclusive.....	22,928,171	21,202,661	1,923,827	2,205,061	1,959,873	822,871	24,851,998	23,407,722
Total of all companies, April-December, inclusive.....	39,660,299	39,060,919	3,294,527	3,322,176	4,034,971	1,581,530	42,960,826	42,383,095

Analysis of the above table shows that in 1915 the total sales (of seven companies) decreased each month from April through August, while in 1916 they were very nearly uniform for each month. In the period from September through December, however, sales increased each month in both 1915 and 1916, except for a slight decrease in December, 1916. With the exception of 597,190 tons in April, 1915, and 140,907 tons in April and May, 1916, which were sold from storage, practically all of the coal sold by the seven companies in the earlier periods of both 1915 and 1916 came directly from current production. During the April to August periods coal was being added to storage each month, except in April, 1915, and April and May of 1916. In the periods from September through December,

1915 and 1916, very little coal was added to storage (except 335,444 tons in September, 1915). During these periods, however, considerable quantities of coal were sold from storage, amounting for the 10 companies to 2,127,795 tons in 1915 and 3,008,774 tons in 1916. This marked increase in sales from storage in the fall of 1916 over those for the same period in 1915 is significant of the tightened supply and increased demand prevailing in the fall of 1916. For the same period the total sales of all the companies were 21,641,252 tons in 1915 and 22,662,407 tons in 1916.

While a great deal of coal was sold from storage in the fall of 1915 and 1916, much of it was coal which had been added to storage from current production after April 1. In considering the extent to which storage coal served to relieve the shortage for the entire season from April through December these additions to storage after April 1 must be deducted. Consequently, although 3,322,176 tons were sold from storage in the last nine months of 1916, 1,581,530 tons of this was coal added to storage after April 1, leaving only 1,740,646 tons sold from storage on hand April 1.

The immediate effect of the eight-hour day on the output.—Immediately upon the introduction of the eight-hour day through the wage agreement of May 5, 1916, the output of the majority of the anthracite coal operators diminished. From some quarters the allegation has been made that this diminished output was due mainly, if not wholly, to the decreased productivity of labor caused by the shortening of labor hours. This allegation can not be sustained in the light of facts.

Comparing the output for the five-month period April–August in 1916 with that of 1915, it is found that for 12 of the principal companies the output had decreased from 22,323,134 gross tons to 20,330,485 gross tons, or almost 2,000,000 gross tons, constituting a reduction of 8.9 per cent, as shown in the following table.

TABLE 11.—*Production of anthracite, by 12 companies, April–August, 1915 and 1916.*

Companies.	1915 (gross tons).	1916 (gross tons).	Decrease (–) or increase (+) in 1916 as compared with 1915.	
			Gross tons.	Per cent.
Philadelphia & Reading Coal & Iron Co.....	3,357,877	3,592,671	+234,794	+ 7.0
Delaware, Lackawanna & Western R. R. Co.....	3,598,950	3,311,423	–287,527	– 8.0
Delaware & Hudson Co.....	3,370,889	2,745,324	–625,565	–18.6
Lehigh Valley Coal Co. }	2,747,299	2,405,903	–341,396	–12.4
Coxe Bros. & Co. (Inc.) }	612,333	619,287	+ 6,954	+ 1.1
Pennsylvania Coal Co. }	2,063,616	1,987,014	– 76,602	– 3.7
Hillside Coal & Iron Co }	614,521	518,733	– 95,788	–15.6
Lehigh & Wilkes-Barre Coal Co.....	1,727,354	1,639,651	– 87,703	– 5.1
Susquehanna Coal Co.....	1,530,729	1,412,495	–118,234	– 7.7
Lehigh Coal & Navigation Co.....	1,569,607	1,051,288	–518,319	–33.0
Seranton Coal Co.....	656,897	589,515	– 67,382	–10.3
Kingston Coal Co.....	473,062	457,181	– 15,881	– 3.4
Total.....	22,323,134	20,330,485	–1,992,649	– 8.9

Examining the labor supply of the same 12 companies during the same periods of 1915 and 1916, it is found that in almost every instance the labor force had diminished, and the percentages of decrease in labor supply outran the percentages of the decrease in production. Hence it can not be maintained that the shortening of labor hours from nine to eight (11 per cent) following April, 1916, was responsible for the decreased production.

TABLE 12.—Percentages of decrease in output, and in labor supply, by months, for 12 companies, April–August, 1916, as compared with 1915.

Companies.	Decrease (–) or increase (+) in output.	Decrease in labor supply.					
		Average, 5 months.	April.	May.	June.	July.	August.
Philadelphia & Reading Coal & Iron Co.	+ 7.0	10.9	2.1	7.1	12.6	17.2	15.6
Delaware, Lackawanna & Western R. R. Co.	– 8.0	5.1	3.0	4.5	5.6	5.8	6.4
Delaware & Hudson Co.	–18.6	10.8	11.5	12.5	10.9	9.3	9.7
Lehigh Valley Coal Co.	–12.4	14.0	12.6	17.8	14.5	11.8	12.7
Coxe Bros. & Co. (Inc.)	+ 1.1	16.1	12.5	17.3	17.8	16.6	16.6
Pennsylvania Coal & Iron Co.	– 3.7	8.8	8.1	8.1	7.6	10.3	11.0
Hillside Coal Co.	–15.6	16.0	15.3	16.8	14.8	16.9	16.4
Lehigh & Wilkes-Barre Coal Co.	– 5.1	20.7	16.7	20.8	19.7	20.6	25.6
Susquehanna Coal Co.	– 7.7	15.4	12.9	15.6	16.9	16.0	15.6
Lehigh Coal & Navigation Co.	–33.0	(¹)	(¹)	(¹)	(¹)	(¹)	7.3
Seranton Coal Co.	–10.3	14.7	17.8	15.5	15.0	12.7	12.3
Kingston Coal Co.	– 3.4	14.3	15.7	15.0	14.4	13.2	13.3

¹ No data secured.

Only in the case of the Delaware, Lackawanna & Western Railroad and the Delaware & Hudson Co. was the percentage of decrease in production larger than the percentage of decrease in labor force. In two instances, however, the reverse was true: The Reading's output increased 7 per cent, while its labor force diminished 10.9 per cent; the output of Coxe Bros. & Co. (Inc.) likewise increased 1.1 per cent, although its labor force decreased 16.1 per cent during the same period.

The monthly shipments by all companies in the anthracite field, which had dropped 2,000,000 tons in April and 400,000 tons in May as compared with the same months in 1915, showed an increase in June, July, and August, 1916:

Shipments of anthracite, in gross tons.

Months.	1915	1916	Decrease (—) or increase (+) in 1916 over 1915.
April.....	6,655,625	4,528,784	—2,126,841
May.....	5,954,949	5,547,899	— 407,050
June.....	5,459,610	5,636,975	+ 177,365
July.....	5,103,665	5,432,878	+ 329,213
August.....	5,330,831	5,531,797	+ 200,966

The heavy drop in the April shipments was due primarily to the absence of the usual discount and to partial cessation of work pending the wage agreement. The May decrease in shipments may be accounted for by the increase in price, which discouraged buying. But the increased shipments during June–August could not have taken place simultaneously with diminishing labor force and diminished hours of labor, except for the increased efficiency of the miners and for the efforts of the companies to produce coal.

Labor supply of railroad coal companies and seven independent operators, April to December, 1915–16.—The anthracite-coal operators have rightly contended that the chief cause of the shortage of production in 1916 was the shortage of labor at the mines. Miners' laborers and semi-skilled workmen were drawn from the mines by the prospect of obtaining higher wages in munition factories and other high-wage industries.

The Commission obtained from 11 railroad coal companies and from 7 independent producers the number of men employed at the mines (men on strike being excluded) during each month of the periods April–December, 1915 and 1916.

The two following tables show, respectively, for 11 railroad coal companies and for 7 independent producers, the number of laborers employed as "outside men," contract miners, contract-miners' laborers, and miscellaneous inside employees during each month of the periods April–December, 1915 and 1916. The third table is a summary showing totals for the 18 companies.

TABLE 13.—*Labor supply of railroad coal companies, April–December, 1915 and 1916.*

[Based on data supplied by the companies.]

	Men employed—					
	Grand total.	Total outside.	Inside.			
			Total.	Contract miners.	Contract miners' laborers.	All other.
April, 1915.....	131,952	32,930	99,022	34,741	24,737	39,544
April, 1916.....	120,136	31,808	88,328	32,886	19,369	36,073
Per cent decrease.....	9.0	3.4	10.8	5.3	21.7	8.8
May, 1915.....	131,951	32,817	99,134	35,219	24,362	39,553
May, 1916.....	116,593	31,255	85,338	31,681	18,365	35,292
Per cent decrease.....	11.6	4.8	13.9	10.0	24.6	10.8
June, 1915.....	131,468	32,718	98,750	35,083	24,387	39,280
June, 1916.....	115,314	30,903	84,411	31,408	18,333	34,670
Per cent decrease.....	12.3	5.5	14.5	10.5	24.8	11.7
July, 1915.....	132,217	33,369	98,848	35,360	24,122	39,366
July, 1916.....	115,021	31,489	83,532	31,298	17,945	34,289
Per cent decrease.....	13.0	5.6	15.5	11.5	25.6	12.9
August, 1915.....	139,510	35,259	104,251	37,357	23,793	43,101
August, 1916.....	121,434	33,671	87,760	33,084	17,601	37,075
Per cent decrease.....	13.0	4.5	15.8	11.4	26.0	14.0
September, 1915.....	138,070	35,145	102,925	37,149	23,385	42,391
September, 1916.....	119,634	33,487	86,147	32,814	16,255	37,018
Per cent decrease.....	13.4	4.7	16.3	11.7	30.4	12.6
October, 1915.....	135,700	34,400	101,300	36,597	23,195	41,508
October, 1916.....	118,774	32,202	86,572	32,786	17,121	36,575
Per cent decrease.....	12.5	6.1	14.6	10.4	26.2	11.9
November, 1915.....	137,097	35,112	101,985	37,166	22,889	41,930
November, 1916.....	119,329	32,203	87,036	33,348	17,098	36,590
Per cent decrease.....	13.0	8.0	14.7	10.3	25.3	12.7
December, 1915.....	135,534	34,694	100,840	36,860	22,717	41,263
December, 1916.....	118,991	32,283	86,708	33,583	17,069	36,101
Per cent decrease.....	12.2	7.1	14.0	8.9	24.9	12.5
Total, 9 months.....	1915 1,213,499	306,444	907,055	325,532	213,587	367,936
	1916 1,065,226	289,439	775,787	292,888	159,186	323,713
Average number em- ployed per month.....	1915 134,833	34,049	100,784	36,170	23,732	40,882
	1916 118,358	32,160	86,199	32,543	17,687	35,968
Per cent decrease.....	12.2	5.5	14.5	10.0	25.5	12.0
April to August inclusive	1915 667,098	167,093	500,005	177,760	121,401	200,844
	1916 588,498	159,129	429,369	160,357	91,613	177,399
Average number em- ployed per month.....	1915 133,420	33,419	100,001	35,552	24,280	40,169
	1916 117,700	31,825	85,874	32,071	18,323	35,480
Per cent decrease.....	11.8	4.8	14.1	9.8	24.5	11.7
September to December inclusive.....	1915 546,401	139,351	407,050	147,772	92,186	167,092
	1916 476,728	130,310	346,418	132,531	67,573	146,314
Average number em- ployed per month.....	1915 136,600	34,838	101,763	36,943	23,047	41,773
	1916 119,182	32,578	86,605	33,133	16,893	36,579
Per cent decrease.....	12.8	6.5	14.9	10.3	26.7	12.4

TABLE 14.—*Labor supply of seven independent anthracite operators, April-December, 1915 and 1916.*

[Based on data supplied by the companies. The "Grand total" column covers all 7 companies, the "Total outside" covers 6 companies, and the "inside" columns cover 5 companies only; hence the cross additions in this table do not add to the totals.]

	Men employed—					
	Grand total.	Total outside.	Inside.			
			Total.	Contract miners.	Contract miners' laborers.	All other.
April, 1915.....	12,083	2,994	8,397	2,702	2,491	2,859
April, 1916.....	10,131	2,541	6,970	2,373	1,582	2,618
Per cent decrease.....	16.2	15.1	17.0	12.2	36.5	8.4
May, 1915.....	12,125	3,057	8,389	2,704	2,481	2,847
May, 1916.....	10,927	2,529	6,897	2,389	1,547	2,558
Per cent decrease.....	17.3	17.3	17.8	11.6	37.6	10.2
June, 1915.....	12,149	3,091	8,397	2,689	2,485	2,844
June, 1916.....	9,820	2,502	6,756	2,351	1,504	2,490
Per cent decrease.....	19.2	19.1	19.5	12.6	39.5	12.4
July, 1915.....	12,181	3,082	8,428	2,681	2,436	2,929
July, 1916.....	9,917	2,491	6,899	2,336	1,607	2,532
Per cent decrease.....	18.6	19.2	18.1	12.9	34.0	13.6
August, 1915.....	11,980	2,933	8,380	2,674	2,323	2,989
August, 1916.....	9,764	2,456	6,765	2,360	1,573	2,402
Per cent decrease.....	18.5	16.3	19.3	11.7	32.3	19.6
September, 1915.....	12,005	2,838	8,497	2,674	2,371	3,076
September, 1916.....	9,523	2,455	6,479	2,336	1,419	2,290
Per cent decrease.....	20.7	13.5	23.7	12.6	40.2	25.6
October, 1915.....	11,896	2,784	8,449	2,667	2,327	3,062
October, 1916.....	8,926	2,347	5,976	2,125	1,304	2,113
Per cent decrease.....	25.0	15.7	29.3	20.3	44.0	31.0
November, 1915.....	11,667	2,713	8,302	2,646	2,269	2,986
November, 1916.....	9,580	2,393	6,450	2,338	1,429	2,247
Per cent decrease.....	17.9	11.8	22.3	11.6	37.0	24.7
December, 1915.....	11,595	2,724	8,225	2,604	2,241	2,967
December, 1916.....	9,580	2,386	6,450	2,353	1,413	2,245
Per cent decrease.....	17.4	12.4	21.6	9.6	36.9	24.3
Total, 9 months.....	{1915 107,681	26,216	75,464	24,041	21,424	26,559
	{1916 87,268	22,100	59,642	20,961	13,378	21,495
Average number employed per month.....	{1915 11,965	2,913	8,385	2,671	2,380	2,951
	{1916 9,696	2,456	6,627	2,329	1,486	2,388
Per cent decrease.....	19.0	15.7	21.0	12.8	37.6	19.1
April to August, inclusive.....	{1915 60,518	15,157	41,991	13,450	12,216	14,468
	{1916 49,659	12,519	34,287	11,809	7,813	12,600
Average number employed per month.....	{1915 12,104	3,031	8,398	2,690	2,443	2,894
	{1916 9,932	2,504	6,857	2,362	1,563	2,520
Per cent decrease.....	17.9	17.4	18.3	12.2	36.0	12.9
September to December, inclusive.....	{1915 47,163	11,059	33,473	10,591	9,208	12,091
	{1916 37,609	9,581	25,355	9,152	5,565	8,595
Average number employed per month.....	{1915 11,791	2,765	8,368	2,648	2,302	3,023
	{1916 9,402	2,395	6,339	2,288	1,391	2,224
Per cent decrease.....	20.3	13.4	24.3	13.6	39.6	26.4

TABLE 15.—*Summary showing comparative labor supply, April–December, 1915 and 1916, for 18 coal companies included in the two preceding tables.*

[Cross additions do not add to totals. See note in heading of preceding table.]

	Grand total.	Total outside.	Inside.			
			Total.	Contract miners.	Contract miners' laborers.	All other.
Total for 9 months in 1915.....	1,321,180	332,660	982,519	349,573	235,011	394,495
Total for 9 months in 1916.....	1,152,494	311,539	835,429	313,849	172,564	345,208
Average number of men employed monthly in 1915.....	146,798	36,962	109,170	38,841	26,112	43,833
Average number of men employed monthly in 1916.....	128,055	34,615	92,825	34,872	19,174	38,356
Per cent of decrease.....	12.8	6.3	15.0	10.2	26.6	12.5

It will be noted from the above tables that in all cases the number of men employed during 1916 was less than during the corresponding month or period of 1915. The summary of both tables shows that the average number of employees during the last nine months of 1916 was 12.8 per cent less than during the same period of 1915, the greatest decrease being in the case of contract miners' laborers whose number in 1916 was 26.6 per cent less than in 1915. Miscellaneous inside employees decreased 12.5 per cent, contract miners decreased 10.2 per cent, while outside employees decreased only 6.3 per cent. The shortage of labor was not confined to any particular month or season, as the total number of employees during each month of 1916 was substantially less than during the corresponding months of 1915.

The railroad coal companies did not suffer from labor shortage as greatly as did the independent producers.

The decrease in 1916 over 1915 of the average number of men employed during the last nine months was 12.2 per cent for the railroad coal companies and 19 per cent for the independent producing companies. The decrease during the period April–August was 11.8 per cent for the railroad coal companies and 17.9 for the independent producers, while during the last four months of the year it was 12.8 per cent for the railroad coal companies and 20.3 per cent for the independent companies.

Labor supply of all companies, calendar years 1915 and 1916, and relation to production.—The Pennsylvania State Department of Mines, courteously furnished to the Commission, in advance, calendar-year data respecting the production and labor supply of the 35 largest anthracite operators in 1916, thus enabling a comparison to be made with the department's published statistics for 1915. These 35 operators produce some 90 per cent of the entire production, and, in less detail, similar data were furnished on all remaining operators.

Table 16 shows, respectively, for the 11 railroad coal companies and for 24 independent producers, the average number of employees classified as to occupation, the average number of days worked, "man days" worked, and production and output per "man day" for the calendar years 1915 and 1916. Though this information is more

complete and authoritative than the data secured by the Commission and set forth in the three preceding tables, it does not afford a direct comparison of conditions in the coal year 1916-17, which is the period particularly under discussion.

The 11 railroad coal companies employed, on the average, 8.7 per cent less men in 1916 than in 1915, the decrease being greatest in the case of contract miners' laborers, whose numbers decreased 21.2 per cent. The average number of days worked was 244 in 1916, an increase of 10.4 per cent over 1915. Thus the number of "man days" (the number of employees multiplied by the number of days worked) worked by the miners and their laborers in 1916 was only 1.7 per cent less than in 1915.

The production of fresh-mined coal by these 11 companies decreased but 1.2 per cent in 1916.

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TABLE 16.—*Comparative labor supply and output of anthracite in the calendar years 1915 and 1916.*

[Based on reports of the Pennsylvania Department of Mines.]

NOTE.—Percentages show increases (roman) or decreases (italic) in 1916 as compared with 1915.

FOR RAILROAD COAL COMPANIES.

Names of companies.	Labor employed.			
	Grand total.		Total outside.	
	1915	1916	1915	1916
1. Philadelphia & Reading Coal & Iron Co.	24,927	23,677	5.0	6,994
2. Delaware, Lackawanna & Western R. R. Co.	20,510	19,078	7.0	3,365
3. Delaware & Hudson Co., including Hudson Coal Co.	18,782	18,053	3.9	4,286
4. Lehigh Valley Coal Co.	15,389	13,600	11.6	3,846
5. Coxie Bros. & Co. (Inc.)	2,425	2,178	10.2	779
6. Pennsylvania Coal Co.	11,762	10,564	10.2	2,674
7. Hillside Coal & Iron Co.	3,634	3,110	14.4	802
8. Lehigh & Wilkes-Barre Coal Co.	10,401	9,048	14.6	2,341
9. Susquehanna Coal Co., including Lytle Coal Co.	13,408	11,233	16.2	4,006
10. Lehigh Coal & Navigation Co.	8,152	7,908	3.0	2,507
11. Scranton Coal Co.	5,008	4,395	12.2	1,315
Total	134,598	122,844	8.8	33,198
				31,970
				3.7

FOR INDEPENDENT COAL COMPANIES.

1. G. B. Markle Co.....	2,785	2,159	22.5	867	736	15.1
2. Kingston Coal Co.....	2,817	2,453	13.0	654	602	8.0
3. A. Pardee & Co. 1	1,561			488		
4. Forty Fort Coal Co.....	1,524	1,015	33.1	295	242	18.0
5. West End Coal Co.....	1,292	1,018	15.3	278	285	2.5
6. Pardee Bros. & Co. (Inc.)	1,993	1,059	6.6	355	279	21.4
7. Temple Coal Co.....	1,183	872	26.3	280	224	13.8
8. Price-Panacast Coal Co.....	1,367	1,236	9.6	237	203	14.3
9. Harleigh-Brookwood Coal Co.	1,203	972	19.2	435	312	28.3
10. Jernyn & Co.....	885	875	1.1	200	158	21.0
11. Dodson Coal Co.....	741	560	24.4	219	180	17.8
12. C. M. Dodson & Co.....	744	759	2.0	261	289	10.7
13. Maryd Coal Co.....	553	442	20.1	178	156	12.4
14. Thomas Colliery Co.....	585	467	20.2	290	252	13.1
15. Saint Clair Coal Co.....	701	700	.1	348	287	17.5
16. Mount Lookout Coal Co.....	826	475	42.5	158	124	21.5
17. Locust Mountain Coal Co.....	655	796	21.5	266	295	10.9
18. Alden Coal Co.....	781	801	2.6	193	189	2.1
19. Pine Hill Coal Co.....	707	755	6.8	194	233	20.1
20. Connell Anthracite Mining Co.....	532	505	5.1	168	141	16.1
21. Lackawanna Coal Co. (Ltd.)	732	673	8.1	158	155	1.9
22. Midvalley Coal Co.....	514	520	1.2	179	161	10.1
23. Oak Hill Coal Co.....	610	422	30.8	210	149	29.0
24. Buck Run Coal Co.....	532	531	10.3	141	134	5.0
Total.....	24,793	20,065	19.0	7,032	5,786	17.7

SUMMARY.

Railroad coal companies (11), total.....	134,598	122,844	8.8	33,198	31,970	3.7
Independent coal companies (24), total.....	24,793	20,065	19.0	7,032	5,786	17.7
All others.....	17,948	16,597	7.5	5,813	5,668	2.5
Grand total.....	177,339	159,506	10.1	46,043	43,424	5.7

1 Sold out to Lehigh Coal & Navigation Co. on July 1, 1916.

TABLE 16.—Comparative labor supply and output of anthracite in the calendar years 1915 and 1916—Continued.
FOR RAILROAD COAL COMPANIES.

Names of companies.	Labor employed.										
	Inside.										
	Total.			Contract miners.			Contract miners' laborers.			All others.	
	1915	1916	Per cent.	1915	1916	Per cent.	1915	1916	Per cent.	1915	Per cent.
1. Philadelphia & Reading Coal & Iron Co.	17,707	16,683	5.8	5,991	5,854	2.3	3,129	2,591	17.2	8,587	4.1
2. Delaware, Lackawanna & Western R. R. Co.	17,148	15,713	8.4	5,481	5,258	4.1	6,205	5,323	15.1	5,372	4.5
3. Delaware & Hudson Co., including Hudson Coal Co.	14,496	13,497	6.9	4,421	4,353	2.0	5,513	4,743	14.7	4,121	2.0
4. Lehigh Valley Coal Co.	11,543	10,084	12.6	4,714	4,518	4.2	2,427	1,727	28.8	4,402	12.8
5. Coxie Bros. & Co. (Inc.)	1,646	1,506	8.5	1,001	917	8.4	181	150	18.5	439	4.8
6. Pennsylvania Coal Co.	9,088	8,119	10.7	3,057	3,027	1.0	3,150	2,360	25.1	2,881	5.2
7. Hillside Coal & Iron Co.	2,772	2,336	15.7	979	959	2.0	937	618	34.0	853	11.3
8. Lehigh & Wilkes-Barre Coal Co.	8,290	6,538	20.8	3,076	2,718	11.6	1,959	1,349	31.1	3,225	23.4
9. Susquehanna Coal Co., including Lytle Coal Co.	9,402	7,751	17.6	3,462	3,096	10.6	1,875	1,297	32.4	3,388	16.7
10. Lehigh Coal & Navigation Co.	5,645	5,495	2.7	1,008	1,773	10.3	404	335	17.1	3,387	6.8
11. Scranton Coal Co.	3,093	3,152	14.6	1,302	1,157	11.1	1,104	810	26.6	1,185	7.9
Total.....	101,400	90,874	10.3	35,092	33,610	4.2	27,027	21,273	21.3	39,281	8.4

FOR INDEPENDENT COAL COMPANIES.

1. G. B. Markle Co.....	1,918	1,423	25.8	606	515	10.1	698	382	45.8	614	496	19.2
2. Kingston Coal Co.....	2,163	1,851	26.9	820	816	2.7	644	423	34.3	680	612	10.0
3. A. Fardee & Co.,.....	1,073	773	37.1	439	339	26.1	349	155	56.6	386	279	27.7
4. Forty Fort Coal Co.....	1,229	733	20.7	342	309	9.6	349	226	36.2	233	198	16.0
5. West End Coal Co.....	638	748	22.3	388	505	30.1	104	108	3.8	146	167	14.4
6. Pardee Bros. & Co. (Inc.).....	923	648	29.8	206	199	26.2	372	242	34.9	285	207	27.4
7. Temple Coal Co.....	1,130	1,033	8.6	311	290	6.8	348	203	24.4	471	480	1.9
8. Price-Pancoast Coal Co.....	768	660	14.0	348	259	25.6	185	133	28.1	235	268	14.0
9. Harleigh-Brookwood Coal Co.....	685	717	4.7	243	219	9.9	248	260	4.8	194	238	22.7
10. Jermyn & Co.....	522	380	27.2	198	170	14.1	95	36	62.1	229	174	24.0
11. Dodson Coal Co.....	483	470	2.7	160	158	1.3	188	210	11.7	135	102	24.4
12. C. M. Dodson & Co.....	375	286	23.7	160	141	11.9	120	66	45.0	95	79	16.8
13. Maryd Coal Co.....	295	215	27.1	163	117	28.2	61	26	67.4	71	72	1.4
14. Thomas Colliery Co.....	353	413	17.0	180	170	5.6	60	92	53.3	113	151	33.6
15. Saint Clair Coal Co.....	668	351	47.5	209	108	48.3	286	128	55.2	173	115	33.5
16. Mount Lookout Coal Co.....	389	501	28.8	96	143	49.0	193	200	3.6	100	158	58.0
17. Locust Mountain Coal Co.....	588	612	4.1	215	230	7.0	146	135	7.5	227	247	8.8
18. Alden Coal Co.....	513	522	1.8	203	198	2.5	141	139	1.4	169	185	9.5
19. Pine Hill Coal Co.....	364	364	.....	192	190	7.0	56	89	5.4	116	115	.....
20. Connell Anthracite Mining Co.....	374	318	9.8	173	199	13.7	211	124	41.2	188	195	3.7
21. Lackawanna Coal Co. (Ltd.).....	335	339	7.2	133	131	13.5	118	133	12.7	84	75	10.7
22. Midvalley Coal Co.....	400	273	37.8	206	175	12.0	46	25	46.7	148	73	50.7
23. Oak Hill Coal Co.....	451	397	12.0	147	149	1.4	166	119	28.3	138	129	6.5
24. Buck Run Coal Co.....												
Total.....	17,761	14,279	19.6	6,665	5,780	13.3	5,568	3,684	33.8	5,528	4,815	12.9

SUMMARY.

Railroad coal companies (11), total.....	101,400	90,874	10.3	35,092	33,610	4.2	27,027	21,273	21.3	39,281	35,991	8.4
Independent coal companies (24), total.....	17,761	14,279	19.6	6,665	5,780	13.3	5,568	3,684	33.8	5,528	4,815	12.9
All others.....	12,135	10,921	9.9	4,665	4,311	7.6	3,784	2,791	26.2	3,686	3,819	3.6
Grand total.....	131,296	116,074	11.6	46,422	43,701	5.9	36,379	27,748	23.7	48,495	44,625	8.0

1 Sold out to Lehigh Coal & Navigation Co. on July 1, 1916.

TABLE 16.—Comparative labor supply and output of anthracite in the calendar years 1915 and 1916—Continued.

FOR RAILROAD COAL COMPANIES.

Names of companies.	Days worked.			Man days ¹ worked by miners and miners' laborers in collieries.	
	Per cent.		1916	1915	Per cent.
	1915	1916			
1. Philadelphia & Reading Coal & Iron Co.	211	266	2,240,651	1,989,607	12.6
2. Delaware, Lackawanna & Western R. R. Co.	217	256	2,687,246	2,618,254	2.6
3. Delaware & Hudson Co., including Hudson Coal Co.	237	231	2,346,408	2,431,400	5.5
4. Lehigh Valley Coal Co.	216	249	1,556,254	1,545,066	.7
5. Coxie Bros. & Co. (Inc.)	231	277	234,729	276,625	6.5
6. Pennsylvania Coal Co.	266	274	1,510,411	1,644,176	8.1
7. Hillside Coal & Iron Co.	243	271	455,169	495,124	8.1
8. Lehigh & Wilkes-Barre Coal Co.	203	227	931,223	1,023,178	9.0
9. Susquehanna Coal Co., including Lytle Coal Co.	222	235	916,857	1,083,313	16.1
10. Lehigh Coal & Navigation Co.	214	225	457,404	490,928	6.8
11. Scranton Coal Co.	163	179	374,068	400,010	6.5
Total	223	246	13,770,420	14,007,681	1.7

FOR INDEPENDENT COAL COMPANIES.

1. G. B. Markle Co.....	303	296	2.3	395,112	274,332	30.6
2. Kingston Coal Co.....	242	255	17.8	355,886	352,164	1.8
3. A. Fardee & Co. ²	263	118	63.1	203,325	.....	.....
4. Kory Fort Coal Co.....	230	133	16.0	133,890	95,342	50.8
5. West End Coal Co.....	250	280	16.0	172,150	155,150	10.2
6. Fardee Bros. & Co. (Inc.).....	274	286	4.4	134,808	175,318	30.1
7. Temple Coal Co.....	197	205	4.0	125,686	99,845	20.6
8. Price-Pancoast Coal Co.....	224	261	16.5	147,616	144,886	1.8
9. Harleigh-Brookwood Coal Co.....	236	252	6.8	125,783	96,080	23.6
10. Jermyn & Co.....	237	279	17.7	116,367	113,523	2.4
11. Dodson Coal Co.....	282	284	1.4	82,040	58,504	28.7
12. C. M. Dodson & Co.....	240	282	17.5	83,520	103,776	24.3
13. Maryd Coal Co.....	195	211	8.2	54,600	43,677	20.0
14. Thomas Colliery Co.....	263	258	1.9	58,912	36,894	37.4
15. Saint Clair Coal Co.....	241	283	17.4	57,840	74,146	28.2
16. Mount Lookout Coal Co.....	274	223	18.6	135,630	52,628	61.2
17. Locust Mountain Coal Co.....	240	249	3.7	69,360	85,407	23.1
18. Alden Coal Co.....	213	236	10.8	76,893	86,140	12.0
19. Pine Hill Coal Co.....	272	265	4.8	93,583	96,045	2.6
20. Connell Anthracite Mining Co.....	285	266	6.7	70,680	66,234	6.3
21. Leekavanna Coal Co. (Ltd.).....	250	236	2.4	96,500	82,688	14.3
22. Midvale Coal Co.....	237	256	8.0	59,487	72,704	22.2
23. Oak Hill Coal Co.....	260	238	.8	65,520	51,600	21.2
24. Buck Run Coal Co.....	256	279	9.0	80,123	74,772	6.7
Total.....	248	254	2.4	3,039,406	2,492,215	18.5

SUMMARY.

Railroad coal companies (11), total.....	223	246	10.3	14,007,681	13,690,083	2.3
Independent coal companies (24), total.....	248	254	2.4	3,039,406	2,492,215	18.5
All others.....	221	231	4.5	3,966,508	3,833,907	3.3
Grand total.....	.....	.....	.....	21,033,595	20,016,210	4.8

¹ "Man days" worked by miners and miners' laborers in collieries were obtained by multiplying the number of miners and miners' laborers in each colliery by the number of days worked by that colliery and by adding these products for each company. The colliery output of each company divided by the "man days" gave the colliery output per man day for miners and miners' laborers.

"Man days" worked by all laborers in collieries and washeries were obtained by multiplying the number of men employed by each company in each district by the number of days worked in that district and by adding these products for each company.

² Sold out to Lehigh Coal & Navigation Co. on July 1, 1916.

TABLE 16.—*Comparative labor supply and output of anthracite in the calendar years 1915 and 1916—Continued.*

FOR RAILROAD COAL COMPANIES.

Names of companies.	Total output in gross tons, including fuel used at the mines.					
	Collieries.			Washeries.		Grand total.
	1915	1916	Per cent.	1915	1916	
1. Philadelphia & Reading Coal & Iron Co.	9,787,815	11,170,803	14.1	63,167	536,988	9,850,982
2. Delaware, Lackawanna & Western R. R. Co.	8,798,276	9,322,295	6.0	354,456	388,520	9,152,732
3. Delaware & Hudson Co., including Hudson Coal Co.	8,047,882	7,122,774	11.5	748,126	895,313	8,018,087
4. Lehigh Valley Coal Co.	7,554,013	7,209,784	4.6	101,625	128,436	7,655,638
5. Coxie Bros. & Co. (Inc.)	1,612,603	1,530,436	5.1	.....	30,177	1,612,603
6. Pennsylvania Coal Co.	5,448,676	5,337,897	2.0	.....	.....	5,448,676
7. Hillside Coal & Iron Co.	1,541,429	1,385,308	10.1	.....	.....	1,541,429
8. Lehigh & Wilkes-Barre Coal Co.	4,841,401	4,383,702	9.5	440,285	305,541	5,281,686
9. Susquehanna Coal Co., including Lytle Coal Co.	4,307,933	4,052,449	7.2	459,732	361,500	4,827,665
10. Lehigh Coal & Navigation Co.	3,832,159	3,823,267	.2	262,504	213,143	4,094,663
11. Scranton Coal Co.	1,932,821	1,711,075	11.5	.....	126,814	1,932,821
Total	57,765,008	57,050,350	1.2	2,429,895	2,986,432	60,194,963
						60,036,782
						18.8
						6.1
						8.8
						4.1
						2.2
						2.0
						10.1
						11.2
						8.6
						1.4
						4.9
						.3

FOR INDEPENDENT COAL COMPANIES.

1. G. B. Markle Co.	1, 698, 741	1, 439, 325	15.3			1, 698, 741	1, 439, 325	15.3
2. Kingston Coal Co.	1, 245, 547	1, 245, 276	.....			1, 245, 547	1, 245, 276	.....
3. A. Pardee & Co.	634, 905	264, 191	58.4			634, 905	264, 191	58.4
4. Forty Fort Coal Co.	590, 832	484, 295	18.0			590, 832	484, 295	18.0
5. West End Coal Co.	578, 231	611, 056	5.7			578, 231	611, 056	5.7
6. Pardee Bros. & Co. (Inc.)	575, 123	620, 453	7.9			575, 123	620, 453	7.9
7. Temple Coal Co.	537, 708	539, 904	3.2			537, 708	539, 904	3.2
8. Price-Pancoast Coal Co.	508, 670	483, 404	5.0			508, 670	483, 404	5.0
9. Harleigh-Brookwood Coal Co.	469, 663	490, 225	4.4			469, 663	490, 225	4.4
10. Jermyn & Co.	449, 996	433, 377	3.7			449, 996	433, 377	3.7
11. Dodson Coal Co.	404, 510	321, 959	17.9			404, 510	321, 959	17.9
12. C. M. Dodson & Co.	392, 192	285, 417	22.9			392, 192	285, 417	22.9
13. Maryd Coal Co.	370, 233	233, 013	15.6	90, 760	218, 383	370, 233	233, 013	15.6
14. Thomas Colliery Co.	276, 067	233, 013	.....			276, 067	233, 013	.....
15. Saint Clair Coal Co.	366, 804	368, 415	.....			366, 804	368, 415	.....
16. Mount Lookout Coal Co.	337, 033	236, 239	32.8			337, 033	236, 239	32.8
17. Locust Mountain Coal Co.	336, 942	490, 549	45.6			336, 942	490, 549	45.6
18. Alden Coal Co.	329, 894	320, 274	2.9			329, 894	320, 274	2.9
19. Pine Hill Coal Co.	313, 305	293, 346	6.4			313, 305	293, 346	6.4
20. Connell Anthracite Mining Co.	312, 428	299, 497	4.1			312, 428	299, 497	4.1
21. Lackawanna Coal Co. (Ltd.)	308, 502	313, 270	1.5			308, 502	313, 270	1.5
22. Midvalley Coal Co.	296, 902	305, 604	2.9			296, 902	305, 604	2.9
23. Oak Hill Coal Co.	286, 840	232, 638	21.6			286, 840	232, 638	21.6
24. Buck Run Coal Co.	286, 595	272, 730	4.8			286, 595	272, 730	4.8
Total.....	11, 994, 221	10, 988, 967	8.4	90, 760	223, 058	12, 084, 381	11, 212, 025	7.1

SUMMARY.

Railroad coal companies (11), total.....	57, 765, 098	57, 050, 350	1.2	2, 429, 895	2, 986, 432	60, 194, 963	60, 036, 782	0.9
Independent coal companies (21), total.....	11, 994, 221	10, 988, 967	8.4	90, 760	223, 058	12, 084, 381	11, 212, 025	7.1
All others.....	.....	.....	.....	.....	.....	7, 521, 579	7, 411, 648	1.5
Grand total.....	.....	.....	.....	.....	.....	79, 801, 323	78, 660, 455	1.4

1 Sold out to Lehigh Coal & Navigation Co. on July 1, 1916.

TABLE 16.—Comparative labor supply and output of anthracite in the calendar years 1915 and 1916—Continued.

FOR RAILROAD COAL COMPANIES.

Names of companies.	Colliery output per man day ¹ for miners and miners' laborers, in gross tons.			Colliery and washery output per man day ¹ all laborers, in gross tons.		
	1915 ²	1916 ²	Per cent.	1915 ²	1916 ²	Per cent.
1. Philadelphia & Reading Coal & Iron Co.....	4.92	4.99	1.4	2.09	1.87	10.5
2. Delaware, Lackawanna & Western R. R. Co.....	3.36	3.47	3.3	1.91	2.06	7.9
3. Delaware & Hudson Co., including Hudson Coal Co.....	3.31	3.04	8.2	1.93	1.79	7.3
4. Lehigh Valley Coal Co.....	4.89	4.63	5.3	2.38	2.20	7.6
5. Coxe Bros. & Co. (Inc.).....	5.83	5.19	11.0	2.86	2.70	6.6
6. Pennsylvania Coal Co.....	3.81	3.53	6.6	1.70	1.80	5.8
7. Hillside Coal & Iron Co.....	3.11	3.04	2.3	1.64	1.54	6.1
8. Lehigh & Wilkes-Barre Coal Co.....	4.73	4.71	.4	2.48	2.26	8.9
9. Susquehanna Coal Co., including Lytle Coal Co.....	4.00	4.43	11.0	1.73	1.86	7.5
10. Lehigh Coal & Navigation Co.....	7.81	8.36	7.0	2.13	2.20	3.3
11. Scranton Coal Co.....	4.83	4.57	5.4	2.23	2.21	.9
Total.....	4.12	4.14	.5	2.04	1.98	2.9

FOR INDEPENDENT COAL COMPANIES.

1. G. B. Markle Co.....	4.30	5.25	22.1	1.98	2.25	13.6
2. Kingston Coal Co.....	3.47	3.53	1.7	1.80	1.78	1.1
3. A. Pardee & Co. ³	3.11	5.08	66.6	1.55	2.47	47.0
4. Forty Fort Coal Co.....	3.35	3.94	17.6	1.68	2.07	7.8
5. West End Coal Co.....	4.26	3.54	16.9	1.92	2.05	2.8
6. Pardee Bros. & Co. (Inc.).....	4.44	3.11	21.8	2.11	2.17	26.7
7. Temple Coal Co.....	3.45	3.34	3.2	2.17	1.50	9.1
8. Price-Pancoast Coal Co.....	3.73	3.10	36.7	1.65	2.50	15.1
9. Harleigh-Brookwood Coal Co.....	3.87	3.82	1.3	1.79	2.06	15.1
10. Jermyn & Co.....	5.38	6.91	28.4	2.15	1.78	17.2
11. Dodson Coal Co.....	4.70	3.10	34.0	2.13	2.54	19.2
12. C. M. Dodson & Co.....	6.78	6.53	3.7	2.20	1.50	31.8
13. Maryd Coal Co.....	4.69	6.32	34.8	3.43	3.05	10.8
14. Thomas Colliery Co.....	6.31	4.97	21.6	2.62	3.75	43.1
15. Saint Clair Coal Co.....	2.63	4.49	70.7	2.17	1.86	14.3
16. Mount Lookout Coal Co.....	4.86	5.74	18.1	1.58	2.23	41.1
17. Locust Mountain Coal Co.....	4.29	3.92	8.6	2.14	2.47	15.4
18. Alden Coal Co.....	3.35	3.05	9.0	1.98	1.69	14.6
19. Pine Hill Coal Co.....	4.42	4.52	2.3	1.63	1.39	14.7
20. Connell Anthracite Mining Co.....	3.20	3.79	18.4	2.06	2.23	8.3
21. Lackawanna Coal Co. (Ltd.).....	3.90	4.20	15.8	1.69	1.82	7.7
22. Midvalley Coal Co.....	4.00	4.20	15.8	2.44	2.30	5.7
23. Oak Hill Coal Co.....	4.53	4.51	2.0	1.87	2.44	14.4
24. Buck Run Coal Co.....	3.58	3.65	2.0	1.89	1.81	2.6
Total.....	3.93	4.41	12.2	1.97	2.17	10.1

SUMMARY.

Railroad coal companies (11), total.....	4.12	4.14	0.5	2.04	1.98	2.9
Independent coal companies (24), total.....	3.93	4.41	12.2	1.97	2.17	10.1
All others.....				1.81	1.84	1.7
Grand total.....						

¹ "Man days" worked by miners' laborers in collieries were obtained by multiplying the number of miners and miners' laborers in each colliery by the number of days worked by that colliery and by adding these products for each company. The colliery output of each company divided by the "man days" gave the colliery output per man day for miners and miners' laborers.

² "Man days" worked by all laborers in collieries and washeries were obtained by multiplying the number of men employed by each company in each district by the number of days worked in that district and by adding these products for each company.

The "colliery and washery output" per man day was obtained by dividing the total output of each company by the above number of man days worked by all laborers.

³ Weighted average used in output per man day.

⁴ Sold out to Lehigh Coal & Navigation Co. on July 1, 1916.

Car shortage at the mines.—Statistics were obtained relating to the railroad car supply at the operations of the following 15 anthracite mining companies:

Buck Run Coal Co., Coxe Bros. & Co. (Inc.), Darkwater Coal Co., Delaware, Lackawanna & Western R. R., the Kingston Coal Co., the Lehigh Coal & Navigation Co., the Lehigh Valley Coal Co., Lehigh & Wilkes-Barre Coal Co., G. B. Markle Co., Pennsylvania Coal Co., and Hillside Coal & Iron Co., Philadelphia & Reading Coal & Iron Co., Scranton Coal Co., Susquehanna Coal Co., and Traders Coal Co.

The figures furnished by 13 of these companies indicated the estimated railroad car tonnage requirements by months during the calendar years 1915 and 1916 for shipment of their potential commercial anthracite production and also showed the tonnage actually shipped from their operations. For one company the loss in potential shipments through inadequate car supply was shown by months, and the tonnage taken in place of actual shipments represents commercial production, without deduction for coal sold to employees or locally. One company furnished statistics of estimated potential shipments and of actual shipments on the calendar-year basis only for 1915 and 1916, but not for monthly periods.

A consolidated tabulation follows of the statistics available on this subject.

TABLE 17.—*Estimated railroad-car tonnage requirements of 13 anthracite mining companies, and estimated commercial tonnage lost through an inadequate car supply, by months, 1915 and 1916.*

	Estimated commercial shipments if fully supplied with cars.		Tonnage shipped.		Estimated production of commercial tonnage lost through an inadequate car supply.	
	1915	1916	1915	1916	1915	1916
	<i>Gross tons.</i>	<i>Gross tons.</i>	<i>Gross tons.</i>	<i>Gross tons.</i>	<i>Gross tons.</i>	<i>Gross tons.</i>
January.....	3,250,582	4,417,709	3,141,210	4,097,664	109,372	320,045
February.....	2,959,208	4,369,660	2,836,550	3,976,877	122,658	392,783
March.....	3,486,654	4,894,091	3,338,020	4,394,644	148,634	499,447
April.....	4,604,499	3,279,103	4,605,631	3,073,936	1 379	205,167
May.....	4,136,732	3,950,546	4,051,140	3,776,639	85,592	173,907
June.....	3,734,623	4,077,789	3,699,578	3,989,027	35,045	88,762
July.....	3,469,623	3,917,704	3,389,589	3,820,079	80,034	97,625
August.....	3,661,909	4,084,790	3,626,009	3,965,309	35,900	119,481
September.....	3,799,054	4,083,075	3,811,188	3,866,956	1 2,396	216,119
October.....	4,659,901	4,292,709	4,562,631	4,138,915	97,270	153,794
November.....	4,557,863	4,402,371	4,467,130	4,299,327	90,733	103,044
December.....	4,553,814	4,179,373	4,176,305	4,076,594	377,509	102,779
Total 14 companies	46,874,462	49,948,920	45,704,981	47,475,967	1,185,522	2,472,953
1 company 12 months	4,642,807	5,137,916	4,562,925	4,413,507	79,882	724,409
Total 15 companies.....	51,517,269	55,086,836	50,267,906	51,889,474	1,265,404	3,197,362

¹ One company reported car tonnage furnished in excess of shipments, 1,511 tons in April, 1915, and 14,530 tons in September, 1915.

The total production of anthracite shipped to market from all operations in 1915 was 69,266,465 gross tons, and in 1916 was 68,007,295 gross tons. The statistics obtained by the Commission relating to railroad car supply cover the shipment or commercial production of 50,267,906 gross tons shipped in 1915, which is 72.6 per

cent of all commercial shipments during that year, and cover 51,-889,474 gross tons, or 76.3 per cent of all commercial shipments in 1916.

At the operations for which figures were secured there was a loss in potential production during the calendar year 1915 of 1,265,404 gross tons, resulting from inadequate railroad car supply, and of 3,197,362 gross tons during 1916 from the same cause. Thus, respecting the operations for which data are available, the estimated shortage in production attributable to deficiency in car supply was 1,931,958 gross tons greater in the calendar year 1916 than during the preceding year. In 1915 the estimated loss in production traceable to this cause at operations for which figures were obtained was equal to 2.517 per cent of their combined commercial shipments, and the corresponding loss in the whole year 1916 represented 6.161 per cent of their commercial shipments. In 1915 the estimated shortage arising through insufficient car supply at the operation referred to represented 1.827 per cent of the total commercial anthracite shipments from all operations during that year, and in 1916 was 4.7015 per cent of all anthracite shipments.

Figures supplied by one railroad coal company indicated its estimated loss in production through insufficient car supply for the calendar years 1915 and 1916 at 79,992 and 724,409 gross tons, respectively, but did not particularize the estimated loss on this account by months.

The 14 remaining companies shipped 36,389,201 gross tons of commercial production during the April-December period of the coal year 1915, which is 67.86 per cent of the 53,624,969 tons shipped in that period by all operations, and shipped 35,006,782 gross tons during the corresponding months of 1916, equal to 70.48 per cent of the 49,668,357 tons shipped from all anthracite operations during these months. Through car shortage it is estimated that they lost 804,858 gross tons of potential production in the last nine months of 1915, which is equal to 2.212 per cent of their commercial shipments during the period referred to. In April-December, 1916, these 14 companies lost 1,260,678 gross tons through the same cause, equivalent to 3.601 per cent of their commercial shipments during the period.

Respecting the 14 companies under consideration, 68 per cent of the estimated loss in potential commercial production during the calendar year 1915 is noted in the April-December period, and 32 per cent in the first three months of the year. In the calendar year 1916, only 51 per cent of the estimated loss attributable to car shortage is shown during the April-December period, the remaining 49 per cent having been caused in January-March; but the loss in tonnage on this account was greater by 455,820 tons, or 56.6 per cent, during April-December, 1916, than in the corresponding months of 1915.

If the September-December periods of both years are considered, the loss through insufficient car supply during those months in 1916 was but 7,828 tons greater than in 1915, a difference of 1.4 per cent, and this negligible decrease could not have appreciably affected the supply.

The last three months of 1916 included the period when the anthracite situation became most acute, and if the October-December periods of both years are considered it appears that the estimated loss of

these 14 companies due to car shortage, actually was greater by 205,985 tons, or 57 per cent, in 1915 than it was in 1916.

In October, 1916, the estimated loss in tonnage by these companies resulting from car shortage was 56,524 tons greater than in October, 1915, equivalent to 58 per cent.

In November, 1916, the month of greatest stress, the estimated loss in tonnage by these companies through car shortage was but 12,311 tons greater than in 1915, a difference of 13.6 per cent.

In December, 1916, the railroad car situation as it affected commercial production of the 14 companies referred to was very much more favorable than during December, 1915, when the estimated commercial production tonnage lost through car shortage was 377,509 tons. In December, 1916, the shortage on this account was but 102,779 tons, and thus in 1915 was greater by 267 per cent.

In November-December, 1916, combined, the shortage in commercial production traceable to lack of cars was 205,823 tons, while in the same months of 1915 it was 468,242 tons, or 127½ per cent, greater than in the corresponding months of 1916.

From the foregoing comparisons and analyses of the loss in potential production through car shortage at the 14 operations that have been discussed, it does not appear that during the September-December period of 1916 the loss in commercial production traceable to the railway transportation factor was serious. In fact, it was of negligible importance and affected the supply at these operations to but a very slight extent. The common report of a then existing car shortage to account for shortage in supply and high prices of anthracite during the latter part of 1916 is not sustained by the statistics compiled for these 14 companies, and there is no reason to believe that if similar compilations were available to cover all anthracite operations, the results or proportions would be materially changed.

Abnormal increase in demand due to artificial causes.—Along with the increase in normal demand, set forth in an earlier section, there developed during the latter third of 1916, an artificial demand of extraordinary intensity. This was the outstanding feature in most of the principal anthracite markets. Toward the close of August fear of a nation-wide railroad strike precipitated a sudden demand. Many consumers who had deferred buying earlier in the year, partly on account of the uncertainty in April as to anthracite prices, pending the new wage agreement, and partly due to the hope that the increased circular prices would not stand, at once placed heavy orders with the retailers. This heavily increased demand in many instances greatly exceeded the facilities and capacity of dealers, who in turn had hesitated to stock coal during the summer, largely owing to the slack business in 1915, and on account of the uncertain conditions which surrounded the making of prices earlier in the year. As a result immediate deliveries could not be made in all cases, orders were only partly filled, and fear of a general coal shortage developed.

This condition continued throughout the fall and winter, intensified at particular times by weather or by local conditions of supply. In many instances duplicate orders were placed by buyers in the hope of getting coal from somebody right away. Dealers in different parts of the country stated that some individual consumers, fearing

a protracted period of coal shortage and advancing prices, laid in unusually large quantities of anthracite. This concentrated immediate demand led to the early depletion of dealers' stocks, and thus heightened the crisis.

Rumors current in a number of the western trade centers that the eastern demand was to be supplied before the western trade would be taken care of, made the anthracite situation in the West all the more tense. Similar rumors in the East attributed shortage there to the sending of coal west, either in order to get the coal up the Lakes by boat before navigation closed or to enable the initial carriers to obtain the higher freight returns which accrue on coal shipped west.

While all the elements mentioned above contributed to produce a general excitement and fear of an impending coal famine, apparently the most powerful factor in bringing on the panic demand was the press, which spread sensational reports broadcast over the country. There were some exceptions, all the more noteworthy for the interesting economic results effected thereby, where the marked stability of the coal market and the absence of excitement on the part of consumers during a critical time is traceable directly to the influence of the local press.

In a large eastern city the president of a leading coal company, during the week when the great increase in the price of anthracite took place, sent a letter to each local newspaper and personally visited the managers of the various papers. He explained to them that the dealers, though their stocks were below normal, had sufficient coal to take care of immediate needs and could handle the situation if the public did not become excited. He therefore requested them not to publish scare and famine articles. As a result of the cooperation of the newspapers no abnormal demand for coal developed in that city at that particular time, notwithstanding that during the same period retailers in other neighboring cities were being overwhelmed with orders. Ten days later one of the evening papers of the city, through a misunderstanding, did print an article which stated that there was a probability of a local coal famine and predicted prices which would exceed those obtained during the coal strike of 1902. On the morning following the announcement the offices of the coal companies were besieged by prospective buyers. Persons who had purchased coal sufficient to last them throughout the winter attempted to place orders for more coal, and the retailers were forced to refuse to accept any more orders. A month later a prominent retailer caused to be printed in the press an article on "The tumble of the price of coal." The article stated that the wholesale price of coal at New York tide had fallen \$3 a ton. The effect of this article was as noticeable as that of the previous article. Immediately following its publication there was a substantial decrease in the demand for coal.

On November 2, 1916, the president of one of the leading producing companies, in a commendable effort to reduce the panic demand, gave to the press the following statement:

The consumers of anthracite coal have become alarmed due to the approaching winter and the reports of a large shortage in the supply.

By consumers purchasing only a sufficient supply of coal at this time for their present needs and postponing until needed further purchases, the present sup-

ply will be conserved and distributed more widely, and later supplies will meet the later needs.

Cooperation along these lines will be the means of securing for all consumers a full supply of coal for the coming winter at normal price.

A systematic advertising campaign conducted by the coal dealers of Milwaukee prevented the spread of alarming press reports that might have developed into a panic. The local coal dealers kept the public well informed through the newspapers of conditions as they actually existed in the Milwaukee coal market. This accounts largely for the fact that in Milwaukee there was no appreciable coal panic on the part of consumers, and the coal market remained fairly normal.

In Chicago, on the other hand, conditions were exactly the reverse. At the time of the impending railroad strike early in September Chicago newspapers began to feature the local coal situation and continued to publish articles predicting a coal famine with \$12 coal, etc. Newspaper reports of this nature continued to appear till the close of the year and assumed an even more alarming tone during January at the time when the results of the freight congestion were most felt. Local coal dealers averred that the newspapers were responsible very largely for the panic among consumers and the critical situations that developed at intermittent periods in the course of the winter.

Coal barge shortage in Atlantic coastwise trade.—Different factors have combined to bring about a shortage of water transportation for coal, both in the Great Lakes and in the Atlantic coastwise trade.

Much Lake and coastwise shipping went definitely into the more profitable overseas traffic to meet the increasing demands of the export trade.

Many of the barges which normally were used to transport coal from tidewater to New England were employed in the harbor trade around New York City, and were diverted to the greatly increased industrial traffic.

In New England, many retailers unable to obtain barges at reasonable rates, or to receive adequate coal supplies by water, attempted to obtain their coal by all-rail routes. This was not always practicable or economical since the yards of many dealers who normally receive their coal by water are not adapted or located with a view to handling all-rail coal.

This disturbance of water transportation to New England had an especially serious effect last winter, and the situation has not improved. There is much apprehension in the coal trade of New England concerning the moving of next winter's anthracite supply.

The Commission has already called the New England barge situation to the attention of the proper executive and administrative officers of the Government for consideration, and such action as may be possible under powers they now possess. But the Commission recognizes the fact that unless adequate relief is afforded promptly there may be much suffering in New England during the winter of 1917-18, and therefore in this report makes recommendations to Congress for the new legislation it believes necessary to prevent such a calamity.

Boat shortage on Great Lakes.—Throughout that region of the Northwest which depends for the greater part of its supply of anthracite on lake shipments a shortage of bottoms made itself felt during the season of 1916. The available lake vessels were not

nearly adequate to meet the increased demand for anthracite carriage over former years. One of the factors which prevented the Northwest from getting as much coal as it needed was the withdrawal of a large part of the boat tonnage from lake service. Many lake steamers that had been sold during the winter for use in coastwise or foreign commerce were sent to the Atlantic at the opening of navigation. Not enough new vessels for lake service were built at the shipyards to make good the shortage.

Earlier in the season the volume of coal shipments over the lake routes was greatly reduced by the fact that coal cargoes from the mines did not arrive at loading ports in satisfactory volume so that quite a number of vessels which were under contract to carry coal were sent on this northbound trip without cargoes rather than to wait. Later in the season the grain blockade at Buffalo held up quite a number of boats that were under contract to bring coal west from Lake Erie.

The leading factor, however, which caused a shortage of boats for coal traffic on the Great Lakes, was the enormous increase in ore and grain shipments from ports at the head of Lake Superior, and the much higher rates on that kind of cargoes, which left fewer freighters available to carry coal. The ore shipments down the Great Lakes for the season up to December 1, 1916, were practically double those of two years ago, and 17,386,790 tons more than for the entire season of 1915. Grain shipments over the same routes showed a corresponding increase in volume for the same period. It was formerly customary for lake boats engaged in carrying coal, after loading coal at Buffalo, to go through the Straits of Mackinac to Sheboygan, Manitowoc, Milwaukee, Racine, and Chicago, and on the return trip to go to the head of the lakes for return ore cargoes. Many of these boats during 1916 carried no coal at all. This was because ore and grain boats by not stopping to take return cargoes of coal could make three trips down with ore and grain, while boats that carried coal up were making only two ore and grain trips. Rates on grain and ore were so high that the three ore and grain cargoes, even returning light, paid better than four cargoes—two down with ore and grain and two back with coal.

The fact that most of the modern freighters are under contract to bring down a stipulated quantity of iron ore during the season, and that delays from fogs, congestion of traffic, and other causes have caused many of the vessels to lose much valuable time, also served as an incentive to owners to gain dispatch by sending freighters up light rather than risk further loss of time in loading and unloading coal cargoes. In the course of the season offers of 70 and 75 cents a ton on small coal cargoes for Milwaukee brought little response from vessel owners, who found it more profitable to take the Lake Superior route and load ore at \$1 a ton net, or wheat at 4½ cents a bushel, even though the upbound trip was made in water ballast instead of with coal.

Delays in transit.—The following table shows delays in transit of shipments of anthracite coal reported by 22 dealers selected at random in seven representative New England markets.

Under "Transit periods" are given the number of days which elapsed between the date of shipment of the coal and the date of arrival. The per cents of the tonnage arriving during the several transit periods are shown for two seasonal periods, April to August and September to December, respectively.

TABLE 18.—Percentage of shipments received in specified transit periods by 22 retailers in 7 representative New England markets, April — August, and September — December, 1916.

Market.	Transit period.	Per cent of tonnage arriving—		Market.	Transit period.	Per cent of tonnage arriving—	
		April to August.	September to December.			April to August.	September to December.
Boston: Rail.....	<i>Days.</i>			Fall River, barge...	<i>Days.</i>		
	{ 1 to 14...	91.6	84.9		{ 3 to 6...	38.6	43.3
	{ 15 to 24...	7.5	13.5		{ 7 to 11...	37.5	33.5
	{ 25 to 73..	.9	1.6		{ 12 to 17..	23.9	23.2
		100.0	100.0			100.0	100.0
Barge	{ 3 to 11...	83.6	58.9	Brockton, rail.....	{ 1 to 15...	73.1	89.7
	{ 12 to 14...	7.9	25.0		{ 16 to 27..	22.9	10.3
	{ 15 to 41..	8.5	16.1		{ 32 to 46..	4.0	.....
		100.0	100.0			100.0	100.0
Providence, barge..	{ 3 to 11...	94.2	55.7	Springfield, rail....	{ 3 to 15...	60.9	71.7
	{ 12 to 17..	5.8	44.3		{ 16 to 27..	22.6	24.5
					{ 23 to 60..	16.5	3.8
		100.0	100.0			100.0	100.0
Attleboro, rail.....	{ 1 to 9....	60.7	31.2	Hartford, rail.....	{ 1 to 12...	78.2	80.1
	{ 10 to 11..	8.5	38.8		{ 13 to 19..	10.5	14.4
	{ 12 to 20..	30.8	30.0		{ 20 to 42..	11.3	5.5
		100.0	100.0			100.0	100.0

In the case of these representative New England markets the reports indicate no great delay in transit on the bulk of the tonnage in September to December, 1916, as compared with April to August. In two of the markets, Boston (both rail and barge) and Providence (barge), from 14 to 44 per cent of the tonnage covered required only from 3 to 10 days longer than the normal, delays beyond this affecting only from 2 to 16 per cent of the tonnage, while from 56 to 85 per cent was received in normal time. In two of the markets, Attleboro (rail) and Fall River (barge), transit conditions were about the same in the two periods, and in three, Brockton, Springfield, and Hartford, transit was faster in September to December than in April to August.

While shipments by barge to Providence were somewhat slower in arrival in September to December than in April to August, it will be noted that all shipments were received within 17 days. Furthermore, none of the shipments by barge to Fall River took longer than 17 days, and none of those to Attleboro by rail over 20 days.

Delays in transit of shipments of anthracite coal to the above markets, and also to Buffalo, N. Y.; Detroit, Mich.; and Lawrence, Mass., are shown in more detail in the following table:

TABLE 19.—Shipments received in specified transit periods by 28 retailers in 10 selected markets of New England and the Middle West, April — August, and September — December, 1916.

BOSTON MARKET, RAIL (7 COMPANIES, 79,434 GROSS TONS).

Transit period.	Shipments received—		Per cent—	
	April to August.	September to December.	April to August.	September to December.
	<i>Gross tons.</i>	<i>Gross tons.</i>		
1 to 6 days.....	6,386	4,515	16.2	11.3
7 to 9 days.....	18,518	16,418	47.1	41.0
10 to 14 days.....	11,144	13,071	28.3	32.6
15 to 24 days.....	2,948	5,408	7.5	13.5
25 to 30 days.....	206	624	.5	1.5
38, 41, 42, 54, and 73 days.....	167	29	.4	.1
Total.....	39,369	40,065	100.0	100.0

BOSTON MARKET, BARGE (6 COMPANIES, 99,119 GROSS TONS).

3 to 4 days.....	6,875	2,412	10.4	7.3
5 to 7 days.....	18,151	10,204	27.5	30.8
8 to 11 days.....	30,181	6,865	45.7	20.8
12 to 14 days.....	5,228	8,272	7.9	25.0
15 to 23 days.....	5,582	3,058	8.5	9.2
36 to 41 days.....		2,291		6.9
Total.....	66,017	33,102	100.0	100.0

LAWRENCE MARKET, RAIL (2 COMPANIES, 2,590 GROSS TONS).

3 to 6 days.....	(¹)	144	(¹)	5.6
7 to 9 days.....	(¹)	495	(¹)	19.1
10 to 11 days.....	(¹)	638	(¹)	24.6
12 to 15 days.....	(¹)	461	(¹)	17.8
16 to 17 days.....	(¹)	374	(¹)	14.4
19, 20, 24, 25, 27, 29, and 41 days.....	(¹)	478	(¹)	18.5
Total.....		2,590		100.0

BROCKTON MARKET, RAIL (1 COMPANY, 5,620 GROSS TONS).

1 to 4 days.....	825	164	22.1	8.7
5 to 7 days.....	543	147	14.6	7.8
8 to 10 days.....	769	514	20.6	28.7
11 to 15 days.....	590	842	15.8	44.5
16 to 27 days.....	852	196	22.9	10.3
32 to 46 days.....	148		4.0	
Total.....	3,727	1,893	100.0	100.0

ATTLEBORO MARKET, RAIL (1 COMPANY, 2,490 GROSS TONS).

1 to 2 days.....	547	82	34.3	9.2
3.5 to 9 days.....	421	197	26.4	22.0
10 to 11 days.....	136	347	8.5	38.8
12 to 17, 19, and 20 days.....	492	268	30.8	30.0
Total.....	1,596	894	100.0	100.0

FALL RIVER MARKET, BARGE (2 COMPANIES, 28,547 GROSS TONS).

3 to 5 days.....	2,093	2,045	17.3	12.4
6 days.....	2,572	5,079	21.3	30.9
7 to 11 days.....	4,534	5,513	37.5	33.5
12 to 17 days.....	2,886	3,825	23.9	23.2
Total.....	12,085	16,462	100.0	100.0

¹ No data secured, April to August.

TABLE 19.—*Shipments received in specified transit periods by 28 retailers in 10 selected markets of New England and the Middle West, April — August, and September — December, 1916—Continued.*

PROVIDENCE MARKET, BARGE (1 COMPANY, 23,214 GROSS TONS).

Transit period.	Shipments received—		Per cent—	
	April to August.	September to December.	April to August.	September to December.
	<i>Gross tons.</i>	<i>Gross tons.</i>		
3 to 6 days.....	5,003	855	27.8	8.4
7 to 8 days.....	7,174	.....	39.9	.....
9 to 11 days.....	4,777	4,832	26.5	47.3
12 to 17 days.....	1,045	4,528	5.8	44.3
Total.....	17,999	10,215	100.0	100.0

SPRINGFIELD MARKET, RAIL (2 COMPANIES, 13,830 GROSS TONS).

7 to 6 days.....	707	285	6.7	8.5
1 to 9 days.....	1,791	650	17.1	19.4
10 to 15 days.....	3,890	1,462	37.1	43.8
16 to 22 days.....	2,375	818	22.6	24.5
23 to 26 days.....	821	42	7.8	1.3
27 to 34 days.....	690	84	6.6	2.5
6, 41, 49, and 60 days.....	215	.....	2.1	.....
Total.....	10,489	3,341	100.0	100.0

HARTFORD MARKET, RAIL (2 COMPANIES, 30,887 GROSS TONS).

1 to 3 days.....	340	526	3.4	2.5
4 to 7 days.....	4,751	9,277	43.0	44.2
8 to 12 days.....	2,655	7,016	26.8	33.4
13 to 19 days.....	1,040	3,022	10.5	14.4
20 to 21 days.....	295	497	3.0	2.4
22 to 26 days.....	301	569	3.1	2.7
29 to 32, 35 to 37, 41 and 42 days.....	515	83	5.2	.4
Total.....	9,897	20,990	100.0	100.0

BUFFALO MARKET, RAIL (1 COMPANY, 3,164 GROSS TONS).

6 to 9 days.....	(1)	452	(1)	14.3
10 to 13 days.....	(1)	662	(1)	20.9
14 to 18 days.....	(1)	1,947	(1)	61.5
19, 21, and 23 days.....	(1)	103	(1)	3.3
Total.....	.....	3,164	.....	100.0

DETROIT MARKET, RAIL (3 COMPANIES, 39,351 GROSS TONS).

2 to 6 days.....	76	3,433	1.9	9.7
7 to 12 days.....	3,178	8,410	78.7	23.8
13 to 20 days.....	594	11,871	14.7	33.6
21 to 31 days.....	153	7,580	3.8	21.5
32 to 39 days.....	35	1,822	.9	5.2
41 to 47 days.....	.....	1,334	.....	3.8
49, 51, 52, 55, 57, 60, 61, 63, and 68 days.....	.....	865	.....	2.4
Total.....	4,036	35,315	100.0	100.0

1 No data secured April to August.

The number of gross tons arriving during each transit period and the per cent which the tonnage of each period forms of the total are given for two seasonal periods, April to August and September to December, except for Buffalo and Lawrence, for which data for September to December only were obtained. Rail and barge shipments

are presented separately. The data are for 28 companies selected at random in 10 markets, and probably represent average conditions in those markets.

This table shows that while the bulk of the shipments of coal to each of the several markets for which comparative data were secured reached its destination in about the same average length of time, whether in the summer-months period or in the fall-months period, there is apparent a general tendency toward slightly longer delays in transit in September to December. To a greater or less extent the proportion of the total tonnage received in the shorter transit periods tends to be smaller in the fall months than in the summer, and the proportion received in the longer transit periods tends to be larger in the fall months than in the summer. However, with the exception of Detroit, the variance in the proportions for the summer and for the fall is not pronounced.

In Detroit the reports indicate marked delays; in April to August only 5 per cent of the tonnage covered was in transit over 20 days; but in September to December nearly 33 per cent took over 20 days. A more detailed study of the per cents given for Detroit reveals that in April to August 80.6 per cent of the tonnage shipped arrived in 12 days or less, while in September to December but 33.5 per cent arrived in this time. The large per cent of the tonnage (78.7 per cent) in April to August was delivered in from 7 to 12 days. In September to December over 55 per cent of the tonnage was from 13 to 31 days en route and 11.4 per cent was from 32 to 68 days arriving. Each month from September to December the delays in transit increased constantly until, in December, only 12.3 per cent arrived in 12 days, 60.6 per cent in from 13 to 31 days, and 27.1 per cent in from 32 to 68 days.

The reports received show that in most of the markets a higher per cent of the tonnage was a long time in transit during the month of December than during any other month. Thus, in December 20.5 per cent of the tonnage shipped by rail to Boston was en route from 15 to 30 days, and 50 per cent of that shipped by barge was from 15 to 41 days arriving; 47 per cent of the Fall River tonnage, 70 per cent of the Attleboro, and all of the Providence tonnage took from 12 to 17 days, or even 20 days, to arrive in this month. In the Lawrence and Fall River markets November was the month of greatest delay; in Buffalo September was the worst month.

It is of interest that a large per cent of the tonnage shipped to Boston by rail that was from 38 to 73 days in arriving was in April and June, such tonnage forming only three-tenths of 1 per cent of the total December tonnage, the only other month in which shipments took this length of time. The extreme delays in the Springfield market occurred throughout the summer months. June and August were the two months showing the longest transit period in the Brockton market, and April was the month of greatest difficulty in the Hartford market.

Data of the above character were not secured for the Chicago market, but certain information was obtained concerning the time of movement on different lines of 384 cars of anthracite coal from Buffalo to Chicago from November 1 to December 10, 1916. These cars

were reported to have taken the following average lengths of time on the several lines:

	Days.
New York, Chicago & St. Louis Railroad.....	7.1
Pere Marquette Railroad.....	10.2
New York Central Railroad.....	10.7
Michigan Central Railroad.....	11.0
Pennsylvania Railroad.....	14.8
Wabash Railway.....	15.0
Baltimore & Ohio Railroad.....	15.2

SECTION 3. EXTENT TO WHICH ADVANTAGE WAS TAKEN OF ABNORMAL CONDITIONS.

There was no class of concerns engaged in the anthracite trade which did not to a greater or less extent take advantage of market conditions to increase gross margins. Some of the railroad coal companies, a number of the independent producers, nearly all the jobbers, and many of the retailers have done this.

Throughout the fall months large quantities of anthracite were mined, sold, and delivered to the bins of the consumer without payment of premium to producer, jobber, or retailer. In some markets the producer and jobber "took care of" the retailer in a fairly satisfactory manner, though with slow deliveries, and the retailer in turn kept his customers in coal without any marked increase in the price.

Nevertheless, in other markets the larger coal companies did not supply the demand adequately and promptly, which resulted in the dealers going to the smaller producers and jobbers for premium coal and passing on to the customer the amount of the premium, or in some cases more than the premium. In still other markets the retailers, themselves provided with coal at not much over normal price, advanced prices stiffly to the consumer, thus giving themselves a very high gross margin of profit. Jobbers not only greatly increased their gross margin on coal from independent collieries, but also in some cases made a far higher margin on the railroad company coal than the 10 cents per ton they are normally supposed to charge on this business. Water freights and charter rates for coal cargoes also advanced sharply in many cases, this being true both for the New England water-borne trade and for the cargo trade on the Great Lakes.

The following sections give a statement of specific facts bearing on the extent to which advantage of the situation was or was not taken (1) by railroad coal companies, (2) by independent producers, (3) by water-transportation companies, (4) by principal jobbers, and (5) by local jobbers and retailers.

SECTION 4. ACTION OF RAILROAD COAL COMPANIES DURING CRISIS.

The railroad coal companies and affiliated sales companies did not sell any coal at premium prices. Rumors of such sales by the selling agent of one company were found on investigation to be based on the fact that the selling agent was also handling the coal of certain independent producers. While the railroad company coal was sold strictly at circular, and fully accounted for separately, the same agent sold the independent coal for all it would bring in the market.

Some of the railroad coal companies made certain small increases in the circular price for certain territories. Though not premium

sales, the sales at these increased circular prices affected the price to the consumer by the amount of the increase. Moreover, these increases in railroad coal company prices were important in that though small per ton they affected a relatively large tonnage and were practically all shifted to the consumers, whereas in a number of instances the premiums paid for other coal were partly absorbed by the retailer with a corresponding lowering of his margin.

Subsequent to the increase in circular prices in May, 1916, there were no increases in railroad coal company circulars in the West till December. On December 8 the Pennsylvania Coal Co. (Erie R. R.), through its selling agents, Williams & Peters, advanced its circular prices 25 cents per ton on prepared sizes of anthracite. Other railroad coal companies announced a similar advance of 25 cents per ton on prepared sizes as follows: Susquehanna Coal Co. (Penn. R. R.), on January 1, 1917; Lehigh Valley Coal Sales Co. (L. V. R. R.), on January 1, 1917; Delaware, Lackawanna & Western Coal Co. (D. L. & W. R. R.), on January 16, 1917; Philadelphia & Reading Coal & Iron Co., on February 15, 1917. This 25-cent increase in price is explained as the tardy shifting to the purchaser of a corresponding increase in freight rates which had been borne by the mining companies since July, 1915.

The increased tonnage sold by certain railroad coal companies to jobbers is stated on page 141 below.

SECTION 5. ACTION OF INDEPENDENT OPERATORS.

Many of the independent operators took advantage of the crisis to charge exorbitant prices, often increasing their prices \$1, \$3, and in some cases \$5 a ton. Some of the independent producers sold a considerable part of their coal at circular to regular customers, and a few, perhaps, sold entirely at circular; but a large part of the independent coal was sold at stiff premiums, and some of the independent producers practically auctioned their coal to the highest bidder, the price changing from day to day and even from hour to hour.

Some instances came to the attention of the Commission in which independent producers arranged to "split" premiums with particular jobbers. The producer sold to the jobber at circular prices, allowing him a commission, and then received from the jobber half of all premiums secured by him. Such arrangements appear to have been intended to supply the jobber with a larger and more profitable tonnage to sell, in return for his finding the highest possible market and sharing the premium.

The records of eight important independent producers, including the two independents covered in the next section of this report, in answer to the Hitchcock resolution, were examined by the Commission for the period from September to December, 1916. The following table shows, for each month from September to December, the average sales receipts of these eight companies, f. o. b. mines, the average costs accepted as comparable, and the margin between receipts and these accepted costs. Their average increase in margin by months for October, November, and December is also shown. A comparison of their average costs accepted as comparable with their average sales receipts indicates that their margin increased 40 cents

per ton during the four months. The additional items of cost reserved by the Commission for further analysis amount to not more than 5 cents per ton.

TABLE 20.—*Costs, receipts, and margins per gross ton, with increases, September—December, 1916, by months, for 8 important independent producers.*

[Fresh-mined coal at the mines.]

	Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	Average Septem-ber-De-cember.
Receipts, all sizes.....	\$3.417	\$3.510	\$3.801	\$3.816	\$3.632
Cost (accepted).....	2.631	2.631	2.631	2.631	2.631
Margin over accepted cost.....	.786	.879	1.170	1.185	1.001
Increase in margin.....		.093	.291	.015	.399

The fresh-mined tonnage produced from September to December, 1916, by the eight independent producers here referred to, was 1,689,-225 gross tons. During the same period their sales amounted to 1,812,419 gross tons.

In the following table costs, receipts, and margins are shown for six of the eight companies included in Table 20:

TABLE 21.—*Costs, receipts, and margins per gross ton, with increases, September—December, 1916, by months, for 6 important independent producers.*

[Fresh-mined coal at the mine.]

	Septem-ber.	October.	Novem-ber.	Decem-ber.	Average, Septem-ber to Decem-ber.	Increase, Septem-ber to Decem-ber.
Receipts, all sizes.....	\$3.224	\$3.333	\$3.666	\$3.699	\$3.488	\$0.475
Cost, accepted.....	2.744	2.771	2.636	2.769	2.729	.025
Margin over accepted cost.....	.480	.562	1.030	.930	.759	.450
Monthly increase in margin.....		.082	.468	1.100		

¹ Decrease.

When formerly the railroad coal companies under the perpetual "65 per cent contracts" purchased the total output of many mines, the coal so purchased was sold at circular, but these contracts having been abrogated by the Supreme Court as in restraint of trade, the coal from these independent mines has often been sold by its producers at high premiums in the recent crisis. In the last four months of 1916 coal purchased by the railroad coal companies from independents, under short-time contracts, fell off about 300,000 tons or 38 per cent.

The total production of anthracite by all independent operators in April to December, 1916, fell off 9 per cent as compared with the same months of 1915.

SECTION 6. QUALITY OF ANTHRACITE SHIPPED.

Anthracite coal is subjected to inspection at the mines of the various operating companies before it is shipped. The final inspection takes place after the coal is loaded on cars. The men employed for this work select from each car several samples of the coal, of

about 50 pounds each, and examine them to ascertain the content of slate, rock, and bone. Should the samples contain a larger percentage of this refuse than is allowed by the standard of preparation in use, the coal is to be "condemned" and in most cases is again run through the breaker and reprepared.

There are several standards of preparation used in different localities, varying according to the physical make-up of the coal mined in the various fields.

The following tabulation shows four of the standards of preparation of anthracite, the source of each being shown in the footnotes:

TABLE 22.—Standards of preparation of anthracite, showing allowable percentages of content of slate and rock and bone.

Size.	A.		B.		C.		D.	
	Slate and rock. ¹	Bone. ¹	Slate and rock. ²	Bone. ²	Slate and rock. ³	Bone. ³	Slate and rock. ⁴	Bone. ⁴
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Broken.....	2½	2½	1	2	1	2	1	2
Egg.....	3	3	2	2	2	2	2	2
Stove.....	3½	3½	4	3	2½	4	4	3
Nut.....	4-5	4-5	5-7	5	4	5	5-7	5
Pea.....	12	.....	8	10	8	5	10	.....
Buckwheat No. 1.....	15	.....	10	10	.....	10	.....	.....
Buckwheat No. 2.....	15	.....	.....	.....	15	.....	15	.....
Buckwheat No. 3.....	15	.....	.....	.....	15	.....	.....	.....

¹ From International Library of Technology, Scranton, 1907. (Preparation of Anthracite, p. 5.)

² From The Coal Trade, 1915, p. 122; 1916, p. 125.

³ From Transactions of the American Institute of Mining Engineers, Vol. XLII, 1912; The Preparation of Anthracite, p. 272, by Paul Sterling, Wilkes-Barre, Pa.

⁴ From Anthracite Bureau of Information

⁵ "Shall not contain such proportion of said bone as to reduce the price below the average market prices of those sizes."

The variations between the different standards are not great, being more pronounced in the steam sizes.

In connection with the inspection of coal for the amount of foreign matter remaining after preparation, examination is also made as to the various other sizes of coal contained in cars supposed to be egg, stove, chestnut, etc. One standard showing the percentage of allowable variations from the desired size follows:

Size.	Percentage of next size allowed.	
	Larger.	Smaller.
Broken.....	.....	20
Egg.....	5	50
Stove.....	5	50
Nut.....	10	15
Pea.....	5	1 15
Buckwheat.....	8	2 15
Rice.....	8	15
Barley.....	8	25

¹ Buckwheat.

² Rice.

Several complaints have been received by the commission regarding the quality of coal shipped during 1916. These have originated usually in the Northwest, although others have been received from the eastern section of the country. In one instance a Boston dealer claimed that the rock and slate that had been picked from coal he

had purchased during the past year had been used to fill in large holes and excavations in vacant lots adjacent to his yard.

In connection with these complaints the commission directed inquiries to the more important operators as to the quantities of coal condemned and the disposition of such coal; and also to large jobbers in the Northwest regarding the quality of shipments received.

A compilation of the replies to all the inquiries addressed to the operating companies follows:

TABLE 23.—*Replies of operating companies to inquiries regarding condemned anthracite, by months, for six-month periods ending December 31, 1915 and 1916.*

Company.	Tons of coal condemned, by months, 1916.						
	July.	August.	September.	October.	November.	December.	Six months total.
1.....	18,979	12,103	7,970	7,083	3,175	2,003	51,313
2.....	12,113	7,663	6,922	4,903	4,906	4,618	41,125
3.....	20,187	22,806	15,657	18,345	4,568	4,953	76,516
4 ²	60,120	55,080	38,240	42,360	33,320	33,160	262,280
5 ³	118,200	100,000	80,440	47,680	46,560	34,360	427,240
6.....	6,489	5,182	4,591	5,823	4,622	4,823	31,530
7.....	8,240	12,720	10,520	9,480	14,480	14,760	70,200
8.....	26,516	21,493	24,410	15,699	21,836	19,571	129,525
9 ⁴							
10 ⁵							
11 ⁶							
12 ⁷							
Total.....	270,844	237,047	188,750	141,373	133,467	118,248	1,089,729

Company.	Tons of coal condemned, by months, 1915.						
	July.	August.	September.	October.	November.	December.	Six months total.
1.....	11,516	16,519	17,863	20,370	11,117	8,019	85,404
2.....	9,829	7,759	5,427	9,648	7,638	6,995	47,296
3.....	38,122	32,594	30,197	36,241	33,603	18,817	189,574
4 ²	56,040	59,400	52,200	53,480	48,720	45,720	315,560
5 ³	60,040	65,120	53,600	64,920	78,120	59,680	381,480
6.....	5,984	5,510	6,274	7,221	5,542	4,470	35,001
7.....	7,120	5,640	6,000	6,120	5,043	4,800	34,720
8.....	15,291	18,222	23,056	30,844	25,838	17,728	130,949
9 ⁴							
10 ⁵							
11 ⁶							
12 ⁷							
Total.....	203,942	210,764	194,617	228,844	215,618	166,229	1,220,014

¹ "Decrease in condemned coal accounted for largely by improved preparation, due to installation of modern jigs of greater capacity and efficiency."

² This company reported the number of cars condemned by months with an approximate total tonnage for the six-month periods. The average tonnage per car for the period was used to obtain the monthly tonnages.

³ The same average tonnage per car was used for this company as for company No. 4, this company only reporting the number of cars condemned. The officers of this company explain the high condemnations during the summer of 1916 by the fact that a tie-up of an unusually large number of breakers for repair caused other breakers to be overcrowded.

⁴ No figures given. "No condemned coal is or has been sold by this company."

⁵ No figures given. "No coal is accepted by this company unless it passes our standard inspection."

⁶ No figures given. "A car of coal condemned at any of our collieries is immediately repaired to conform to the inspection rules."

⁷ No figures given. "We have never shipped condemned coal. Whenever a car is condemned we repick it until it is marketable."

These 12 companies had an approximate total production of 60,-982,000 gross tons of coal in 1916, or roughly, 69 per cent of the

total production for the year. Each company stated emphatically that it did not sell or ship any condemned coal.

As it appears that practically no condemned coal has been sold during 1916, the question arises as to whether the same care was exercised in the inspection of coal as in preceding years. The increased demand during the past year, with the resulting enhancement of prices, would tend to make the inspection somewhat lax in order that coal which under ordinary circumstances would be condemned might be used to increase the available supply.

A recapitulation has been made in the following table of the relation between production tonnage and condemned tonnage for the period September to December, 1915 and 1916, for 7 of the 12 companies to whom inquiries were sent, these being the only ones for which data for such a calculation were available:

TABLE 24.—*Relation of condemned anthracite to production.*

	1916			1915		
	Production.	Condemned coal.	Relation of condemned coal to production.	Production.	Condemned coal.	Relation of condemned coal to production.
September.....	2,220,713	97,790	4.4	2,290,750	135,017	5.9
October.....	2,451,038	84,213	3.4	2,893,034	157,804	5.5
November.....	2,507,896	72,427	2.9	2,810,873	132,458	4.7
December.....	2,409,600	69,128	2.9	2,728,063	101,749	3.7
Total, excluding two companies.....	9,589,247	323,558	3.4	10,722,720	527,028	4.9
Total, seven companies.....	14,297,504	581,838	4.1	16,201,169	805,308	5.0

It will be noted that the proportion of condemned coal to production in the last four months of 1916 was generally smaller than for the same period of 1915. The natural conclusion to be drawn from this decline in amount of condemned coal in proportion to total production is that the coal passed by inspectors was of a lower grade than it was in the same period of 1915. The amount of coal condemned in September, 1915, was nearly 6 per cent of the total production; while in December, 1916, the amount of coal condemned was a little less than 3 per cent of production. Allowing due consideration for changes and improvements in equipment of breakers, etc., which tend to eliminate to a greater extent the bone and slate, as one cause for a reduction in the proportional amount of coal condemned, there is every reason to believe that the imperative demand during the fall of 1916 created a condition of laxity and carelessness on the part of the inspectors of the operating companies.

SECTION 7. INCREASES IN WATER TRANSPORTATION RATES.

Barge rates to New England.—Water freights on anthracite coal transported from New York to New England during 1916 increased considerably over those prevailing in 1915.

The table following shows the maximum and minimum independent barge rates per gross ton from New York to certain New England ports, and the railroad coal company barge rates (known as "company" rates) to Boston, Mass., during the years 1915 and 1916.

TABLE 25.—Barge rates per gross ton, on anthracite from New York tidewater to New England ports, 1915-1916.

	New York to—															
	Boston, Mass.				Portsmouth, N. H., independent.		Portland, Me., independent.		Providence, R. I., independent.		Fall River, Mass., independent.		New Bedford, Mass., independent.		New Haven, Conn., independent.	
	Independent.		"Company."		High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.
January, 1915.....	\$0.80	\$0.65	\$0.65	\$0.50	\$0.85	\$0.75	\$0.80	\$0.65	\$0.50	\$0.50	\$0.50	\$0.50	\$0.55	\$0.30	\$0.20	
January, 1916.....	2.75	2.00	.65	.50	3.00	2.25	2.75	2.00	2.50	1.75	2.50	1.75	2.50	1.50	1.00	
Increase.....	1.95	1.35	.....	.....	2.15	1.50	1.95	1.35	2.00	1.25	2.00	1.25	1.95	1.20	.70	
February, 1915.....	.90	.85	.65	.50	.95	.80	.90	.75	.50	.45	.50	.45	.55	.50	.30	
February, 1916.....	2.50	1.25	.65	.50	2.50	1.35	2.50	1.25	1.50	.80	1.50	.80	1.75	.80	.75	.50
Increase.....	1.60	.40	.....	.....	1.55	.55	1.60	.50	1.00	.35	1.00	.35	1.20	.30	.45	.20
March, 1915.....	.85	.65	.65	.50	.90	.75	.85	.75	.50	.45	.50	.45	.55	.50	.30	.30
March, 1916.....	1.75	1.10	.65	.50	1.75	1.25	1.75	1.10	1.25	.80	1.25	.80	1.15	.80	.90	.35
Increase.....	.90	.45	.....	.....	.85	.50	.90	.35	.75	.35	.75	.35	.60	.30	.60	.05
April, 1915.....	.85	.70	.65	.50	.90	.80	.85	.75	.45	.45	.45	.45	.50	.50	.30	.30
April, 1916.....	1.50	1.15	.65	.50	1.50	1.30	1.50	1.25	1.10	.90	1.10	.90	.....	.....	.70	.45
Increase.....	.65	.45	.....	.....	.60	.50	.65	.50	.65	.45	.65	.45	.....	.....	.....	.....
May, 1915.....	.90	.75	.65	.50	1.00	.80	.90	.75	.45	.45	.45	.45	.50	.50	.....	.....
May, 1916.....	1.50	1.25	.65	.50	1.00	1.30	1.75	1.25	1.00	.90	1.00	.90	.....	.....	.60	.50
Increase.....	.60	.50	.....	.....	.00	.50	.85	.80	.55	.45	.55	.45	.....	.....	.....	.....
June, 1915.....	.90	.65	.65	.50	1.00	.70	.90	.65	.45	.45	.45	.45	.50	.50	.....	.40
June, 1916.....	1.50	1.45	.65	.50	2.00	1.50	1.75	1.50	.90	.80	.90	.80	.....	.....	.45	.....
Increase.....	.60	.80	.....	.....	1.00	.80	.85	.85	.45	.35	.45	.35	.....	.....	.....	.....
July, 1915.....	.80	.65	.65	.50	.80	.70	.80	.65	.45	.45	.45	.45	.50	.50	.....	.50
July, 1916.....	1.10	1.25	.65	.50	1.50	1.35	1.50	1.30	.90	.80	.90	.80	.....	.....	.45	.40
Increase.....	.60	.60	.....	.....	.70	.65	.70	.65	.45	.35	.45	.35	.....	.....	.....	.....

August, 1915.....	.80	.65	.65	.50	.85	.70	.80	.65	.45	.40	.45	.50	.40	.45	.60	.40
August, 1916.....	1.60	1.35	.65	.50	1.75	1.40	1.75	1.40	1.10	.85	1.10	.85	.40	1.10	.60	.40
Increase.....	.80	.70	.....	.....	.90	.70	.95	.75	.65	.45	.65	.45	.40	.45	.....	.....
September, 1915.....	.70	.65	.65	.50	.75	.70	.70	.65	.45	.40	.45	.50	.40	.45	.....	.....
September, 1916.....	1.75	1.00	.80	.55	1.80	1.70	1.75	1.60	1.25	1.10	1.25	1.10	.40	1.10	.80	.50
Increase.....	1.05	.95	.15	.05	1.05	1.00	1.05	.95	.80	.70	.80	.70	.40	.45	.....	.....
October, 1915.....	.70	.65	.65	.50	.75	.70	.75	.65	.50	.45	.50	.55	.45	.50	.....	.....
October, 1916.....	1.80	1.50	.80	.55	1.85	1.70	1.80	1.70	1.50	1.25	1.50	1.25	.45	.50	.85	.50
Increase.....	1.10	.85	.15	.05	1.10	1.00	1.05	1.05	1.00	.80	1.00	.80	.45	.50	.....	.....
November, 1915.....	.85	.65	.65	.50	.90	.70	.85	.65	.50	.50	.50	.55	.45	.55	.....	.....
November, 1916.....	2.50	2.00	2.00	.65	2.60	2.50	2.60	2.50	1.60	1.25	1.60	1.25	.45	.55	1.10	.60
Increase.....	1.65	1.35	1.35	.15	1.70	1.80	1.75	1.85	1.10	.75	1.10	.75	.45	.55	.....	.....
December, 1915.....	2.00	1.00	.65	.50	2.00	1.00	2.00	1.00	1.50	.75	1.50	1.50	1.00	.75	1.00	.90
December, 1916.....	2.25	1.75	1.50	.65	2.50	2.00	2.40	1.90	1.50	1.25	1.50	1.50	1.00	1.40	.90	.70
Increase.....	.25	.75	.85	.15	.50	1.00	.40	.90	.....	.50	.....	.....	.25	.65	1.10	.20

1 Decrease.

Railroad coal company barge rates are shown only for Boston, but the differences in rates between independent and "company" barges to that port may be regarded as representative, in a general way, of other ports.

The table shows that the independent barge rates were, except for New Haven in December, higher in each month of 1916 than in the corresponding month of 1915. During the latter part of 1915 the rates to all points increased greatly, due to wage increases and the European war. The high rates prevailing during the winter of 1915-16 decreased but little during the summer of 1916. The rates during the fall of 1916 were considerably higher than those for the corresponding period of 1915 but were not very much higher than those prevailing in the summer of 1916, because the latter were abnormally high. The acuteness of the anthracite market in November shows its effect upon the independent barge rates for that month, which were \$1.65 higher than during November, 1915.

The barge rates of railroad coal companies on coal from New York tidewater sold "alongside Boston Harbor" remained constant during 1915 and the first eight months of 1916 at a maximum of 65 cents and a minimum of 50 cents. During September, 1916, Williams & Peters raised their rate to 75 cents, while the Susquehanna Coal Co. increased its rate to 80 cents, and in October the Lehigh Coal & Navigation Co. raised its rate to 80 cents. During November the rates of Williams & Peters varied between 75 cents and \$2, while the Lehigh Coal & Navigation Co. increased its rate to \$1, and that of the Lehigh & Wilkes-Barre Coal Co. advanced to 75 cents. In December, Williams & Peters reduced their rate from \$2 to \$1.50, and Dickson & Eddy raised their rate from 65 cents to 75 cents. There was only one railroad coal company, the Lehigh Valley Coal Sales Co., which did not raise its rates from New York to Boston during the fall of 1916.

The Philadelphia & Reading Coal & Iron Co., which ships from Port Richmond, Philadelphia, the coal which it sells "alongside Boston Harbor," maintained a rate of 75 cents per ton to Boston during 1915 and 1916.

Increased freight rates on the Great Lakes.—Transportation rates were an element of considerable importance in all lake coal traffic in 1916. Competition from ore and grain shipments and the withdrawal of boats with an aggregate of 174,476 tons from lake traffic for maritime service had a decided effect on lake coal rates. Under normal conditions the rates on anthracite lake shipments from Buffalo west to lake ports in Illinois, Wisconsin, and Minnesota are considerably lower than the all-rail rates to the same points. At times during the 1916 season of navigation water rates on coal advanced more than 100 per cent as compared with 1915, vessel owners taking advantage of the abnormal conditions to demand exorbitant rates. In 1915 the average rate on contract cargoes from Buffalo to ports on the Great Lakes was from 30 to 35 cents per ton. In 1916 it was difficult to contract cargoes and recourse had to be taken to "wild" cargoes, rates, ranging all the way from 35 cents to \$1.25 per ton, the maximum being charged toward the close of the season in December. The rates of transportation in 1916 from the Pennsylvania mines via Buffalo and Erie by lake to Superior and Duluth varied from \$2.30

to \$3.25 per ton; to Milwaukee from \$2.30 to \$3.25; and to Chicago from \$2.35 to \$3. Deducting the \$2 per ton rate on coal from the mines to Buffalo, the difference during 1916 between all-rail and the lake rates from Buffalo ranged to Chicago from 75 cents to \$1.40 per ton; to Milwaukee from 30 cents to \$1.25; and to Minneapolis and St. Paul from \$2.75 to \$3.70 (including the rail rate of \$1.45 per gross ton from the docks at Superior and Duluth to the Twin Cities).

SECTION 8. ACTIVITIES OF JOBBERS AND WHOLESALERS.

The middlemen who intervene between the producers and retailers of anthracite may be classified as (1) principal jobbers, and (2) dock and trestle companies and local jobbers. Those included under the latter classification will be treated under discussion of the local markets in which they are situated.

In order to discuss the extent to which advantage was taken of abnormal conditions by the large jobbers, whose headquarters in most cases are in New York or Philadelphia, it is necessary first to differentiate between the two main classes of such jobbers so that the opportunities of each class to profit by the abnormal conditions can be explained.

The larger class of jobbers is made up of those who purchase anthracite outright and sell at the market prices—in other words, speculators; these are jobbers proper. The other class comprises those whose chief sources of anthracite are independent producing companies for which they are sales agents. These are, properly speaking, commission men. There is a considerable overlapping of these two classes, as many jobbers of the first class are sales agents for small producing companies, and those of the second class buy small amounts of coal for speculative purposes. Though both speculative jobbers and sales agents normally sell a large proportion of their coal on a spot basis, they also do a considerable business on contract, agreeing to furnish their customers specified tonnages each month at a fixed price, or taking care of their needs without contract at reasonable prices in order to build up a regular trade.

The opportunities to profit by abnormal conditions are different in the two classes. The speculative jobbers are in a position to obtain for their product all that the market will bear and retain the resulting profits for themselves. Normally, the future market prices can be judged fairly well, and thus the speculative opportunities are minimized and losses or large profits are infrequent. In a market such as that which prevailed during the fall and winter of 1916 the speculative opportunities and risks of these jobbers were very great. Not only were there great profits but some heavy losses.

The jobbers of the second class, the sales agents, are generally limited by their agency contract to certain maximum and minimum profits. The typical sales agency agreement between independent producing companies and sales agents provides that the agent shall sell the coal at the best market price and retain as his profit 15 cents per ton on the prepared sizes and 10 cents per ton on the steam sizes. Frequently it is further provided that the sales agent shall retain

5 per cent of the amount obtained above circular prices. These above-circular prices are obtained on their "free" coal, i. e., the coal remaining after their contracts have been filled and their regular customers, whom they are obligated to supply, have been supplied. With these sales agents of independent companies, free coal usually forms a large proportion of their business. In the fall and winter of 1916-17 the sales agents of independent operators sold their free coal at the highest market prices, as required by their arrangement with the producing companies, but the agents only retained their customary, or but slightly increased, commission.

It appears that a few of the jobbers anticipated the abnormal prices of the fall of 1916 and purchased or contracted for large supplies of anthracite. Others, despite the prophecies of trade papers¹ and certain sales agents, were not prepared for the rise in prices. The majority of the jobbers proper generally have large contracts for the sale of coal to manufacturers, gas and electric companies, and municipal, State, and Federal departments. Some of those who held these contracts had purchased by contract with producers sufficient coal to apply on their contracts, while others depended principally on "free" coal to supply them.

Some instances of jobbers who arranged for large supplies of coal in advance of the panic period are here given. One of the railroad coal companies had about 72,000 tons of mixed red and white ash coal at its storage yards at New York tidewater, which it sold around the first of October, 1916, on contracts at circular prices to various jobbers and retailers. The contracts generally specified that the purchasers would take the coal in equal monthly proportions before the 1st of January, 1917. Two jobbers who purchased 41,000 tons of this coal made enormous profits. Another case which came to the Commission's notice was a jobber who contracted during August with an independent producing company for the purchase at circular prices of 7,500 tons a month, to be delivered each month during the remainder of the year. The jobber sold this coal at high premiums. The Commission has considerable information of this character to show that some jobbers had "free" coal when the rise of prices occurred. It is not thought, however, that these jobbers had a much greater amount of "free" coal purchased at circular prices during the fall of 1916 than during the same period of 1915. In fact, one of the larger New York jobbers, who ordinarily had contracted at less than circular for the 500,000-tons output of an independent producing company, and who contracted for the sale of only a small proportion of it, was without any such source in 1916.

During October when high-premium coal made its first appearance the jobbers made large profits. As stated above, many of them had considerable quantities of coal purchased or contracted for at circular prices. This coal was sold at the higher market prices, and netted large profits. Such coal did not last very long, and as the retailers

¹ "It is not difficult to calculate the possibilities of a premium market developing later on, and, in fact, one large seller takes the position that something in the direction indicated may be witnessed before October, or early in that month."—The Coal Trade Journal, Aug. 16, 1916, p. 896.

were clamoring for more coal, the speculative jobbers immediately began to bid against one another to obtain coal from the independent producing companies. The latter were able to obtain high premiums from the jobbers and accordingly the jobber demanded still higher premiums.

The intensity of the competition among the jobbers to obtain coal was exceeded by that among the retailers. Normally, the retailers are canvassed by the jobbers, but when it became apparent that there was going to be a shortage in coal the retailers applied to the jobbers for coal. The Commission has information to the effect that some retailers in New York, when they wanted to purchase one cargo of coal, called on four or five jobbers and asked each of them to quote prices. This action of the retailers had the effect of increasing the apparent demand, and the jobbers who had no coal under contract for immediate delivery attempted to obtain option prices from each other to fill the demands of the retailers, which were such that jobbers could purchase from each other and still make large profits.

Not only did the jobbers make option purchases from each other, but when \$10 and \$11 coal appeared on the New York markets they frequently purchased outright from each other for speculative purposes.

During the first week of November when the wholesale prices of coal reached \$12 in New York, the supply was not sufficient for a time to meet the demand even at this high price. Those jobbers who had coal on hand immediately started to auction it, as it were. Retailers were called on the telephone and asked to bid for the coal on hand. A few jobbers employed salesmen, other than their regular ones, to "peddle" coal among the jobbers and retailers. These men were allowed a certain percentage of the profits.

New jobbing firms started in business. Some were without offices of any kind, while others had only desk room in offices. In fact, it appears that any one who could obtain an option for the purchase of a cargo of coal immediately established himself as a jobber. Several salesmen of prominent jobbers purchased and sold anthracite on their own account.

Source and distribution of certain purchases of high-premium coal, selected at random.—In order to show the source of and number of agencies which handled high-premium coal, the Commission took indiscriminately from the books of certain retailers a list of purchases of high premium coal, noting the date of purchase, the number of tons, size and grade of coal, the name of the firm from whom the coal was purchased, and the purchase price. The firms from whom the retailers purchased were then requested to furnish the names of the firms from whom they purchased it and the purchase price. This method of inquiry was followed until the coal was traced to a producing company. Thus, in the case of 110 high premium purchases the Commission obtained a complete record of the jobbers with their individual profits, which intervened between the producing company and the retailers.

TABLE 26.—Retailers' purchases at New York tidewater of 25,281 gross tons of high premium anthracite, selected at random, and traced from producers through middlemen to retailers, with premiums received by producers and gross profits taken by middlemen, November, 1916.

[All prices and profits are per gross ton. All coal is white ash, except that otherwise designated. Sales prices are f. o. b. vessel New York tidewater.]																									
Quantity and size of coal.			Original sale.				Sales by middlemen to each other.										Sale to retailer.				Summary.				
Item	Tons.	Size.	Producer.	Price.	Premium at mine.	Sold to middleman.		First sale.		Second sale.			Third sale.			Fourth sale.		Retailer.	Price.	Profit paid by retailer to last middleman.	Producer's premium.	Middlemen's profit.	Total premiums and profits	Circular price.	Total price paid by retailer.
			No.			No.		No.	Price.	Sold to second middle-man.	Sold to third middle-man.	Price.	Sold to fourth middle-middleman.	Price.	Sold to fifth middle-middleman.	Price.	Profit paid to fourth middleman.	No.							
1	150	Stove.	13	\$7.90	\$2.20	8	No.			No.								5	\$12.00	\$4.10	\$2.20	\$4.10	\$9.30	\$5.70	\$12.00
2	23	Stove.	13	9.65	3.95	8												5	12.00	2.35	3.95	2.35	6.30	5.70	12.00
3	94	Nut.	10	5.85	1.10	9			\$6.00	\$0.15								5	12.00	6.00	1.10	6.15	6.25	5.75	12.00
4	46	Nut.	10	9.75	4.00	9			8	9.90	.15							5	12.00	2.10	4.00	2.25	6.25	5.75	12.00
5	254	Egg.	2	6.99	1.54	5												5	10.00	3.01	1.54	2.97	4.55	5.45	10.00
6	138	Stove.	2	7.03	1.33	5												5	10.00	2.97	1.33	2.97	4.30	5.70	10.00
7	197	Egg.	25	6.55	1.10	5												4	9.00	2.45	.85	2.45	3.55	5.40	9.00
8	194	Stove.	25	6.55	.85	5												4	9.00	2.45	.85	2.45	3.55	5.70	9.00
9	93	Nut.	25	6.55	.80	5												4	9.00	2.45	.80	2.45	3.55	5.70	9.00
10	43	Stove.	15	9.40	.10	13	\$9.90	\$0.50										5	10.65	2.90	3.60	1.35	4.95	5.70	10.65
11	462	Nut 1.	28	6.15	0.00	19			7	7.25	.62							5	11.60	10.70	0.00	4.00	4.00	6.15	10.15
12	129	Egg.	8	6.15	.70	7			1	9.75	1.75			\$11.50	\$1.75			5	11.60	10.85	.70	5.45	5.90	5.70	11.60
13	254	Stove.	10	6.55	.85	9			2	11.50	3.00							5	11.60	10.85	.85	5.05	5.90	5.70	11.60
14	166	Stove.	2	8.50	2.80	1			2	11.50	3.00							5	11.60	10.85	.75	3.10	5.85	5.75	11.60
15	153	Nut.	2	8.50	2.75	1			3	10.50	26							5	11.60	.60	4.79	1.36	6.15	5.45	11.60
16	200	Egg.	7	10.24	4.79	6			3	10.50	.26							5	11.60	.60	4.54	1.36	5.90	5.75	11.60
17	200	Stove.	7	10.24	4.54	6			3	10.50	.26							5	11.60	.60	4.49	1.36	5.85	5.75	11.60
18	200	Nut.	7	10.24	4.49	6			3	10.50	.26							5	11.60	.60	4.49	1.36	5.85	5.75	11.60
19	150	Egg.	11	7.95	2.50	10			8	8.45	.50							5	11.60	3.15	2.50	3.65	6.15	5.45	11.60
20	350	Stove.	11	7.95	2.25	10			8	8.45	.50							5	11.60	3.15	2.25	3.65	5.90	5.70	11.60
21	195	Egg.	9	8.45	3.00	8			2	11.50	1.55							5	11.60	.40	3.00	3.15	6.15	5.45	11.60
22	187	Stove.	11	7.95	2.25	10			8	8.45	.50							5	11.60	.40	2.25	3.65	5.90	5.70	11.60
23	177	Egg.	4	9.33	3.88	4												5	11.60	.17	3.88	1.7	4.05	5.45	9.50
24	24	Stove.	4	9.33	3.63	4												5	11.60	.17	3.63	1.7	3.80	5.70	9.50
25	475	Egg.	29	5.90	.45	5												5	11.00	5.10	.45	5.10	5.55	5.45	11.00
26	212	Nut 1.	28	6.15	0.00	7			4	6.25	.10							5	9.65	1.90	0.00	3.50	3.50	6.15	9.65

[All prices and profits are per gross ton. All coal is white ash, except that otherwise designated. Sales prices are f. o. b. vessel New York tidewater.]

[illegible]

Red ash coal.

TABLE 26.—Retailers' purchases at New York tidewater of 25,281 gross tons of high premium anthracite, selected at random, and traced from producers through middlemen to retailers, with premiums received by producers and gross profits taken by middlemen, November, 1916—Continued.

Quantity and size of coal.			Original sale.			Sales by middlemen to each other.										Sale to retailer.			Summary.							
Item.	Tons.	Size.	Producer.	Price.	Premium at mine.	Sold to middleman.	First sale.			Second sale.			Third sale.			Fourth sale.			Retailer.	Price.	Profit paid by retailer to last middleman.	Producer's premium.	Middlemen's profit.	Total premiums and profits paid by retailers.	Circular price.	Total price paid by retailer.
							Sold to second middleman.	Price.	Profit paid to first middleman.	Sold to third middleman.	Price.	Profit paid to second middleman.	Sold to fourth middleman.	Price.	Profit paid to third middleman.	Sold to fifth middleman.	Price.	Profit paid to fourth middleman.								
78	38	Broken.	No.	\$9.50	\$1.55	No.	2	\$11.00	\$1.50	No.	13	\$3.90	\$1.00	No.	5	\$11.10	\$0.10	\$4.55	\$1.60	\$6.15	\$1.95	\$11.10				
79	43	Stove.	26	9.70	4.00	8									3	10.50	.80	4.00	1.80	4.80	3.70	10.50				
80	209	Stove.	12	9.45	3.75	8									3	10.50	1.05	3.75	1.05	4.80	3.70	10.50				
81	122	Egg 1.	19	10.38	4.23	6									4	10.75	.37	4.23	.37	4.60	16.15	10.75				
82	135	Stove 1.	19	10.38	4.23	6									4	10.75	.37	4.23	.37	4.60	16.15	10.75				
83	243	Nut 1.	19	10.38	4.23	6									4	10.75	.37	4.23	.37	4.60	16.15	10.75				
84	126	Egg.	16	7.65	2.20	17	15	7.90	.25	13	\$3.90	\$1.00			10	9.15	.25	2.20	1.50	3.70	3.45	9.15				
85	193	Egg.	17	6.85	1.40	17	15	7.90	1.05	13	8.90	1.00			11	9.15	.25	1.40	2.30	3.70	3.45	9.15				
86	273	Stove.	16	7.45	1.75	17	15	8.40	.95	13	8.90	.50			11	9.15	.25	1.75	1.70	3.45	3.70	9.15				
87	66	Stove.	17	7.65	1.95	17	15	8.40	.75	13	8.90	.50			7	9.15	.25	1.95	1.50	3.45	3.70	9.15				
88	214	Nut.	16	8.00	2.25	17	15	8.40	.40	13	8.90	.50			11	9.15	.25	2.25	1.15	3.40	3.75	9.15				
89	29	Nut.	17	6.30	.55	17	15	8.40	2.10	13	8.90	.50			7	9.15	.25	.55	2.85	3.40	3.75	9.15				
90	257	Egg.	4	9.33	3.88	4			.15						15	9.50	.17	3.88	.17	4.05	5.75	9.50				
91	42	Egg.	7	9.10	3.65	6	4	9.25	.15						15	9.50	.25	3.65	.40	4.05	5.45	9.50				
92	179	Egg.	11	9.95	4.50	11									3	10.50	.55	4.50	.55	5.05	5.45	10.50				
93	456	Stove.	11	9.95	4.25	11									3	10.50	.55	4.25	.55	4.80	5.70	10.50				
94	335	Egg.	1	10.50	5.05	1									16	9.00	1.50	5.05	1.50	6.55	5.45	9.00				
95	212	Egg 1.	19	8.91	2.79	6									3	9.25	.31	2.79	.31	3.10	14.15	9.25				
96	274	Stove 1.	19	8.91	2.79	6									3	9.25	.31	2.79	.31	3.10	16.15	9.25				
97	125	Fgg.	16	7.45	2.00	17	15	7.90	.45	13	8.90	1.00			18	9.15	.25	2.00	1.70	3.70	3.45	9.15				
98	134	Egg.	17	5.65	.20	17	15	7.90	2.25	13	8.90	1.00			18	9.15	.25	2.00	3.50	3.70	3.45	9.15				
99	44	Egg.	18	7.75	2.30	17	15	7.90	.15	13	8.90	1.00			18	9.15	.25	2.30	1.40	3.70	3.45	9.15				
100	233	Stove.	16	8.00	2.30	17	15	8.40	.40	13	8.90	.50			18	9.15	.25	2.30	1.15	3.45	3.70	9.15				
101	91	Stove.	17	8.50	2.80	17	15	8.40	.10	13	8.90	.50			7	9.15	.25	2.80	.65	3.45	3.70	9.15				
102	304	Nut.	16	8.10	2.35	17	15	8.40	.30	13	8.90	.50			7	9.15	.25	2.35	1.03	3.40	5.75	9.15				
103	103	Egg.	13	7.90	2.45	8									3	9.00	1.10	2.45	1.10	3.55	5.45	9.00				
104	157	Egg.	13	9.65	4.20	8									18	9.00	.65	4.20	.65	4.85	5.45	9.00				
105	101	Egg.	10	9.75	4.30	9	8	9.90	.15						3	9.00	.90	4.30	.75	5.05	5.45	9.00				

[illegible]

Red ash coal.

The producing companies to which reference is had in the table are as follows, the names being arranged alphabetically and not in the order of the numbers in the table:

Alden Coal Co.	Midvalley Coal Co.
Buck Ridge Coal Mining Co.	Mill Creek Coal Co.
Colonial Collieries Co.	Mount Hope Coal Co.
Dodson & Co., Chas. M.	Mount Jessup Coal Co.
Dodson Coal Co.	Pardee Brothers & Co.
East Bear Ridge Colliery Co.	Peoples Coal Co.
Excelsior Coal Co.	Pine Hill Coal Co.
Girard Mammoth Coal Co.	Red Ash Coal Co.
Haddock Mining Co.	Susquehanna Coal Co.
Harleigh Brookwood Coal Co.	Thomas Colliery Co.
Kemmerer & Co., M. S.	Trevorton Colliery Co.
Kingston Coal Co.	Upper Lehigh Coal Co.
Lee Coal Co., George F.	West End Coal Co.
Locust Mountain Coal Co.	Wilkes-Barre Anthracite Coal Co.

The jobbers to which reference is had in the table as are follows, also arranged alphabetically:

Davison Coal Co., A. S., New York, N. Y.	Pattison & Bowns, New York, N. Y.
Dickson & Eddy, New York, N. Y.	Peale, Peacock & Kerr, New York, N. Y.
Dodson & Co., Weston, Bethlehem, Pa.	Potts & Co., F. A., New York, N. Y.
Haddock & Payne, Wilkes-Barre, Pa.	Robinson, Haydon & Co., New York, N. Y.
Hartwell, Lester & Clitter, New York, N. Y.	Russell, F. C., New York, N. Y.
Hellner & Son, New York, N. Y.	Sandford & Talbott, New York, N. Y.
Lineaweaver & Co., H. H., Philadelphia, Pa.	Seller-Rogers-Brown Co., New York, N. Y.
Madeira, Hill & Co., Philadelphia, Pa.	Sturgess, C. B., New York, N. Y.
Meeker & Co., New York, N. Y.	Whitney & Kemmerer, Philadelphia, Pa.
Parrish, Phillips & Co., New York, N. Y.	

The retailers who purchased the coal which is traced in the table are as follows:

Burns Bros., New York, N. Y.	Meyer-Denker-Sinram Co., New York, N. Y.
Eastern Coal Co., Providence, R. I.	Olin J. Stephens, Inc., New York, N. Y.
Hencken & Willenbrock, New York, N. Y.	

The list of retailers' purchases traced in the table contains 110 items, but as it frequently occurred that a jobber used coal from two or more sources to make up a single shipment, the table contains 142 original purchases from producing companies.

The tonnage represented in the table amounts to 25,281 gross tons, on which the retailers paid premiums aggregating \$107,718, an average of \$4.26 per ton. Of these premiums, \$68,768.65, or an average of \$2.76 per ton, was obtained as mine premiums by the producing companies, while \$38,768.65, or an average of \$1.53 per ton, constituted the profits of the jobbers, being at least ten times the normal profit. There were 15,843 tons, or 63 per cent of the whole, which passed through the hands of but one middleman between the producer and retailer. The jobbers' profit on this tonnage was \$16,909.48, an average of \$1.07 per ton. There were 4,329 tons, or 17 per cent of the whole, which passed through the hands of two middlemen between the producer and retailer. The profits of the jobbers who first handled the coal were \$3,209.90, an average of \$0.74

per ton, while the profits of the second middleman were \$7,008.95, an average of \$1.62 per ton. There were 4,456 tons, or 18 per cent of the whole, which passed through the hands of three middlemen. The average profits per ton of these middlemen were \$0.66, \$0.72, and \$0.63, respectively. There were 553 tons, or 2 per cent of the whole, which were handled by four jobbing middlemen. The average profits per ton of these jobbers were \$0.19, \$1.84, \$1.42, and \$0.79, respectively. There were 100 tons which passed through the hands of five middlemen before it was purchased by the retailer. The average jobbers' profits per ton on this coal were \$0.35, \$0.50, \$0.25, \$0.50, and \$1.90, respectively. The 37 per cent that passed through the hands of from two to five middlemen yielded an average total profit of \$2.32 to the jobbers concerned.

The premiums and profits on individual items vary considerably. Thus, items Nos. 123, 124, 135, 136, and 137 were sold by producer No. 10 at 15 cents below circular, while on item No. 94 producer No. 1 obtained a mine premium of \$5.05. The range of the gross margins of the middlemen is greater still. Thus, on item No. 94, jobber No. 1 sustained a loss of \$1.50 per ton while jobber No. 8 made a profit of \$6 per ton on item No. 3. It appears that item No. 25 yielded the largest gross profit in amount, jobber No. 5 having a profit of \$2,422.50 on 475 tons egg.

Item No. 26 is perhaps the most interesting. This coal was purchased of producer No. 28 at \$6.15 by jobber No. 7, who sold it to jobber No. 4 at a profit of \$0.10 per ton. Jobber No. 4 sold it to jobber No. 18 at a profit of \$0.50 per ton, who in turn resold it to the original purchaser (jobber No. 7) at a profit of \$1 per ton. Jobber No. 7 on his second handling of this coal made a profit of \$1.90 per ton. The Commission has information to the effect that such occurrences were frequent in the bituminous trade during the fall and winter of 1916-17, and that there were many instances of this in the anthracite trade. Jobber No. 7, when his attention was called to the fact that he had twice handled item No. 26, stated that "this very often happens in abnormal times such as existed when this transaction was made."

While there was a large quantity of the high-premium coal, of which instances selected at random are given in the table, it was a relatively small proportion as compared with the tonnage that went direct from producing companies to retailers and consumers at relatively moderate prices. Yet the high price of this small proportion of the total was used by many retailers as a ground for selling all their coal at prices based on the cost of the small quantity of this high-priced coal which they had to buy. Moreover, in some retail markets, the dealers who had been able to buy cheap coal sold it at the same price as the dealers who had to buy high-premium coal, and thus the price for the community tended to be based on the cost of coal to the dealer who had paid most, and the fortunate dealers stocked with low-price coal made abnormal profits. Hence the effect of the speculative activities of the jobbers was far greater than the tonnage they handled would indicate.

Gross margins of 10 New York jobbers.—From the data obtained by the Commission from the principal New York jobbers, including two companies with headquarters elsewhere, gross margins have been calculated for the following jobbers: Weston Dodson & Co. (Bethlehem, Pa.); H. B. W. Haff; Heilner & Son; Parrish, Phillips & Co.; Pattison & Bowns; Peale, Peacock & Kerr; F. A. Potts & Co.; Robinson, Haydon & Co.; Seiler-Rogers-Brown Co.; Whitney & Kemmerer (New York branch; headquarters, Philadelphia).

The firms listed above sold 5,742,436 gross tons of anthracite in 1915, 6,654,946 in 1916, and during the periods September to December, 1915 and 1916, 2,157,328 and 2,567,402, respectively.

The gross margins per gross ton of each of these jobbers, classified according to the source and size of coal, during the months of September, October, November, and December, 1916, and of 4 of the 10 jobbers for the same months of 1915, are shown in the accompanying table, the numbers by which the jobbers are identified being in a different order from that in which their names have just been listed.

TABLE 27.—*Gross margins per gross ton of 9 principal New York jobbers in 1915 and 10 in 1916, by months, September — December, of each year.*

Jobber.	Source of coal.	Size of coal.	1916			
			September.	October.	November.	December.
No. 1	Weighted average of all business.	All.....	\$0.10	\$0.13	\$0.11	\$0.24
2	do.....	do.....	.07	.14	.53	.44
3	do.....	do.....	.13	.21	.30	.27
4	do.....	do.....	.15	.22	.58	.25
5	Railroad coal companies.....	do.....	.14	.12	.19	.16
5	Certain independent producer.....	do.....	.21	.56	1.21	.50
5	Other independent operators and jobbers.	do.....	.10	.36	.33	.36
5	Weighted average of all business.	do.....	.17	.31	.38	.31
6	do.....	do.....	.12	.17	.69	.43
7	Independent producers for whom they are sales agent.	do.....	.15	.15	.17	.18
7	Other independent producers and jobbers.	do.....	.15	.11	.29	.27
7	Weighted average of all business.	do.....	.15	.15	.18	.19
8	do.....	do.....	.11	.31	.57	.35
9	Jobbers ¹	Prepared	.11	.35	.57	.37
9	do. ¹	Steam...	.06	.13	.20	.35
9	Weighted average of all business.	All.....	.07	.20	.36	.35
10	Railroad and jobber.....	Prepared	.09	.10	.15	.11
10	do.....	Steam...	.12	.13	.16	.23
10	Weighted average of all business.	All.....	.12	.13	.16	.20
	Weighted average of all companies.	.....	.13	.22	.42	.29
	Tonnages sold each month on which averages are based.	.....	574,006	703,167	695,712	594,517

¹ Ninety per cent of this coal purchased from and sold to other jobbers.

TABLE 27.—*Gross margins per gross ton of 9 principal New York jobbers in 1915 and 10 in 1916, by months, September — December, of each year—Contd.*

Jobber.	Source of coal.	Size of coal.	1915			
			September.	October.	November.	December.
No. 1	Weighted average of all business.	All.....	(¹)	(¹)	(¹)	(¹)
2	do.....	do.....	\$0.15	\$0.17	\$0.07	\$0.07
3	do.....	do.....	(¹)	(¹)	(¹)	(¹)
4	do.....	do.....	.11	.11	.10	.13
5	Railroad coal companies.	do.....	(¹)	(¹)	(¹)	(¹)
5	Certain independent producer.	do.....	(¹)	(¹)	(¹)	(¹)
5	Other independent operators and jobbers.	do.....	(¹)	(¹)	(¹)	(¹)
5	Weighted average of all business.	do.....	(¹)	(¹)	(¹)	(¹)
6	do.....	do.....	(¹)	(¹)	(¹)	(¹)
7	Independent producers for whom they are sales agent.	do.....	.13	.14	.14	.14
7	Other independent producers and jobbers.	do.....	.15	.10	.09	.20
7	Weighted average of all business.	do.....	.14	.14	.14	.15
8	do.....	do.....	.10	.09	.08	.08
9	Jobbers ²	Prepared	(¹)	(¹)	(¹)	(¹)
9	do. ²	Steam.....	(¹)	(¹)	(¹)	(¹)
9	Weighted average of all business.	All.....	(¹)	(¹)	(¹)	(¹)
	Weighted average of all companies.	.....	.12	.13	.10	.11
	Tonnages sold each month on which averages are based.	.....	313, 642	385, 811	380, 431	423, 647

¹ Data not obtained.² Ninety per cent of this coal purchased from and sold to other jobbers.

The average margins of each of the 10 jobbers for September ranged from \$0.07 to \$0.17, but 7 of them were between \$0.10 and \$0.15, i. e., the normal margin. During October they ranged from \$0.13 to \$0.31, while the gross margins on the various kinds of business, where the Commission obtained such data, ranged from \$0.10 to \$0.56. It was during November, however, that the ranges between the high and low average margins were greatest. Thus, the average margins of each of the jobbers varied from \$0.11 to \$0.69, while the margins on various kinds of business ranged from \$0.15 to \$1.21. For December the average margins of each of the jobbers varied from \$0.19 to \$0.44, and the margins in particular kinds of business ranged from \$0.11 to \$0.50.

The margins shown for 1915 are representative of the jobber's normal margin. These are the profits of four jobbers, whose classes of business represent both commission business and buy-and-sell transactions. Furthermore, for each of the four jobbers, the average margins in 1915 did not differ materially one from the other in a given month of that year, and were fairly constant during the four months.

Accepting the average margins of the four jobbers in 1915, \$0.12, \$0.13, \$0.10, and \$0.11 for September, October, November, and December, respectively, as representing the normal margins of jobbers, the gross margins for 1916 were abnormal. The 13-cent average margin for September, 1916, is but 8 per cent more than that for the same month in 1915, while the 22, 42, and 29 cent margins for October, November, and December, 1916, are 85 per cent, 320 per cent, and 164 per cent, respectively, higher than those for the same months in 1915.

Gross margins of 5 Philadelphia jobbers.—Sufficient data to determine gross margins were obtained from the following Philadelphia jobbers whose trade extends into various markets: H. H. Lineaweaver & Co.; Madeira, Hill & Co.; C. D. Norton & Co.; Thorne, Neale & Co.; Whitney & Kemmerer (Philadelphia branch).

All of these jobbers are sales agents for affiliated producing companies. Several of them also purchase other coal to sell.

The firms listed above sold 3,858,995 gross tons of anthracite in 1915, 3,850,496 in 1916, and during the period September to December, inclusive, 1915 and 1916, 1,534,201 and 1,384,501, respectively.

The gross margins per gross ton of each of these jobbers during the months of September, October, November, and December, 1916, are shown in the following table, the numbers assigned the jobbers not corresponding to the order in which they are named above:

TABLE 28.—*Gross margins per gross ton of 5 Philadelphia jobbers.*

Jobber.	Source of coal.	1916			
		Septem-ber.	October.	Novem-ber.	Decem-ber.
No. 1.....	Weighted average of all business.....	\$0.09	\$0.10	\$0.15	\$0.15
No. 2.....	do.....	.14	.17	.26	.23
No. 3.....	do.....	.11	.13	.20	.15
No. 4.....	do.....	.08	.23	.31	.27
No. 5.....	do.....	.10	.17	.15	.15
	Weighted average of all companies.....	.10	.14	.18	.16
	Tonnage sold each month	357,940	350,721	342,389	333,151

These margins do not show the extreme fluctuations that are shown in the case of jobbers in New York. It appears that jobbers Nos. 1 and 5 under the agreements with their affiliated producing companies did not share in the premiums obtained on the coal they sold, but turned the excess back to the producing companies. Consequently their margins were not abnormal. Jobbers Nos. 2 and 4 had margins somewhat above the normal, but these were due, in great part, to profits made on coal sold in the New York market.

The chief reason for the comparatively normal margins of the Philadelphia jobbers is that the Philadelphia market, in which much of their coal was sold, would not absorb premium coal. With but few exceptions the retailers in Philadelphia and vicinity received coal at circular prices from the railroad coal companies and independent producers and jobbers from whom they normally purchased their coal. Thus, the average gross margins of the five Philadelphia jobbers for the last three months—\$0.14, \$0.18, and \$0.16—were approximately only 50 per cent more than the normal margins. It is safe to say that these margins were kept at the low figures, as compared with those of jobbers in New York City, largely because of the refusal of the Philadelphia market to pay more, and the acquiescence of the jobbers in selling to their old customers at circular prices.

Gross margins of a New England jobber.—A New England jobber did a large business in handling railroad coal on a margin of 10 cents per gross ton. The greater part of this coal was purchased f. o. b. mine at 10 cents below circular and sold at circular for shipment all rail to points in New England.

The next class of his business, in importance, was shipments to allied companies. Nearly all railroad coal was purchased at 10 cents below circular and sold to allied companies at circular. Some railroad and jobber coal was purchased at circular or slightly above and sold to the allied companies at cost to the jobber. This explains the low margin of 7 cents in September and 8 cents in December on this class of business.

The third class of business was unimportant, representing but 5 per cent of his jobbing transactions. The greater part of it was railroad coal purchased at 10 cents reduction from circular and sold in cargo lots to outsiders at prices not more than 10 cents above circular, thereby securing a gross margin of not more than 20 cents. This business being small did not figure greatly in the profits.

The table follows:

TABLE 29.—Gross margin per gross ton of a New England jobber.

Source of coal.	Size of coal.	Percentage of all business September-December.	1916			
			September.	October.	November.	December.
Railroad (commission).....	All....	63	\$0.10	\$0.10	\$0.10	\$0.10
Railroad and some jobber, cargo shipments to allied companies.	...do...	32	.07	.10	.10	.08
Railroad and some jobber, cargo shipments to other than allied companies.	...do..	5	.19	.12	.....	(¹)
Weighted average of all business .....	.....	.....	.10	.10	.10	.08
Total tonnage sold.....	.....	.....	22,345	17,603	14,172	16,188

¹ Loss of over \$200.

Gross margins of a New England dock man.—The following table presents the margins realized on anthracite by a dock man in New England. These margins do not include a degradation charge of from 25 to 35 cents per gross ton on domestic sizes, the charge varying with the nature of the business. This degradation charge is included in the cost of coal to the dock man and therefore does not appear in the margins. A discharging fee of 20 cents per gross ton, charged by the company direct to the purchaser, has been included in the margins, as examination of the company's books shows that for the years 1915 and 1916 the actual discharging cost was approximately 5 cents per gross ton. Practically 95 per cent of all coal purchased was railroad coal purchased at 10 cents below circular.

Wharf-rail coal as indicated in this table is coal received by barge at the dock man's wharf and transhipped by rail. This business is divided into two classes.

(1) Sales to allied companies, which represent 9 per cent of the business. The margin of 16 cents for September appears to be a normal margin on this class of business, as compared with margins realized prior to this date. The margin increased to 53 cents in October, falling to 35 cents in November and to 30 cents in December.

(2) Sales to other than allied companies represent 86 per cent of the business. Margins were far above normal, indicating that this dock man sold in the open market and obtained all he could for his coal. Prior to September margins on this business averaged approximately 50 cents per gross ton. In September the margin was 62 cents,

an increase of 24 per cent over the assumed normal. The October margin was 84 cents, or a 68 per cent increase. The November margin reached the high mark of \$1.48, or 196 per cent increase, declining to 95 cents in December, or a 90 per cent increase over normal.

Local sales to allied companies or coal sold locally at the wharf to affiliated companies represent another class of business. This business is small, representing but 5 per cent. The margins realized are practically the same, with the exception of December, as those realized on transhipped coal to affiliated companies.

TABLE 30.—Gross margin per gross ton of a New England dock man.

Source of coal.	Size of coal.	Percentage of all business September-December.	1915			
			September.	October.	November.	December.
Railroad and some jobber, wharf-rail (sales to allied companies).....	All....	9	\$0.16	\$0.53	\$0.35	\$0.30
Railroad and some jobber, wharf-rail (sales to other than allied companies).....	do....	86	.62	.84	1.48	.95
Local (sales to allied companies).....	do....	5	.17	.55	.39	.56
Weighted average of all business .....			.57	.81	1.33	.83
Total tonnage sold.....			2,228	4,236	3,603	799

Tonnage of railroad-company coal furnished to certain jobbers.—A number of retail dealers complained to the Commission that jobbers were receiving more coal from the railroad coal companies than in normal years. Likewise certain jobbers stated that their competitors were being favored in this respect by the railroad coal companies.

The Commission has information which tends to show that a greater quantity of railroad-company coal was handled by certain jobbers in the last four months of 1916 than in the corresponding period of 1915, notwithstanding the railroad coal companies were at that time apportioning coal to retail customers on the basis of a shortage. This information is not inclusive enough, however, for the purpose of a generalization on this matter.

A prominent eastern jobber received the following quantities of coal from a railroad coal company during the last four months of the years 1915 and 1916, respectively:

Year.	September.	October.	November.	December.	Total, September to December.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1915.....	13,990	26,369	18,670	23,397	82,426
1916.....	36,610	26,592	31,590	23,319	121,111
Increase, 1916.....	22,620	223	12,920	2,922	38,685

Thus in the four-month period under consideration this jobber received 38,685 tons more during 1916 than in 1915, an increase of 47 per cent. During November, 1916, the month of this period when the demand for coal was most urgent, the jobber referred to received about 70 per cent more coal from the railroad coal company concerned than during the same month of 1915.

Another railroad coal company sold coal as indicated in the following statement, to certain jobbers in the last nine months of 1915 and 1916, respectively. In the tabulations which follow, receipts of coal by the jobbers discussed are shown for the period April-August, inclusive, and for the months of September, October, November, and December, separately. Total receipts are shown for the nine-month period April to December, inclusive, and for the four-month period September to December, inclusive. Increases or decreases in 1916, based on the corresponding period of 1915, also are indicated.

The principal increases in sales of this railroad coal company to particular jobbers were evidently due to the fact that other jobbers who had in 1915 bought large quantities from this company did not buy from it in 1916, thus making it necessary for the company to find other purchasers for its coal.

Jobber.	Year.	April to August.	September.	October.	November.	December.	Total, September to December.	Grand total.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
A ¹	1915 1916	141,599 57,312	10,264 10,112	14,158 12,586	..... 18,799	..... 7,464	24,422 48,961	166,021 106,273
Increase or decrease, 1916.....		² 141,599 57,312	² 10,264 10,112	² 14,158 12,586	² 18,799	² 7,464	² 24,422 48,961	² 166,021 106,273
B ¹	1915 1916	57,312 3,158	10,112	12,586	18,799	7,464	48,961	106,273 3,158
Increase or decrease, 1916.....		² 57,312 3,158	² 10,112	² 12,586	² 18,799	² 7,464	² 48,961	² 106,273 3,158
C ³	1915 1916	3,158 65,508	..... 7,421	..... 11,849	..... 19,985	..... 44,331	..... 83,586	..... 149,094
Increase or decrease, 1916.....		² 3,158 65,508	² 7,421 12,565	² 11,849 12,074	² 19,985 16,026	² 44,331 4,942	² 83,586 45,607	² 149,094 81,342
D.....	1915 1916	35,735 29,773	12,565 5,144	12,074 225	16,026 21,930	4,942 26,129	45,607 77,199	81,342 146,903
Increase or decrease, 1916.....		² 35,735 29,773	² 12,565 5,144	² 12,074 225	² 16,026 21,930	² 4,942 26,129	² 45,607 77,199	² 81,342 146,903
E.....	1915 1916	69,704 97,317	10,386 21,588	18,754 20,863	26,129 14,174	77,199 15,353	146,903 71,978	169,295 22,392
Increase or decrease, 1916.....		² 69,704 97,317	² 10,386 21,588	² 18,754 20,863	² 26,129 14,174	² 77,199 15,353	² 146,903 71,978	² 169,295 22,392
F.....	1915 1916	27,613 8,318	11,202 1,917	2,109 7,910	2,756 12,950	10,776 6,313	5,221 29,090	22,392 37,408
Increase or decrease, 1916.....		² 27,613 8,318	² 11,202 1,917	² 2,109 7,910	² 2,756 12,950	² 10,776 6,313	² 5,221 29,090	² 22,392 37,408
G.....	1915 1916	8,318 13,213	1,917	7,910 2,539	12,950 1,455	6,313 1,408	29,090 5,402	37,408 18,615
Increase or decrease, 1916.....		² 8,318 13,213	² 1,917	² 7,910 2,539	² 12,950 1,455	² 6,313 1,408	² 29,090 5,402	² 37,408 18,615
H.....	1915 1916	13,213 2,535	..... 2,084	2,539	1,455	1,408	5,402 2,084	18,615 4,619
Increase or decrease, 1916.....		² 13,213 2,535	² 2,084 2,084	² 2,539	² 1,455	² 1,408	² 5,402 2,084	² 18,615 4,619
I.....	1915 1916	2,535 1,820	2,084 .....	..... .....	..... .....	..... .....	2,084	4,619 1,820
Increase or decrease, 1916.....		² 2,535 1,820	² 2,084	² 2,084	² 2,084	² 2,084	² 2,084	² 4,619 1,820
J.....	1915 1916	1,820 1,290	..... .....	..... .....	..... .....	..... .....	..... .....	1,820 1,290
Increase or decrease, 1916.....		² 1,820 1,290	² 1,820	² 1,820	² 1,820	² 1,820	² 1,820	² 1,820 1,290

¹ This jobbing company purchased no coal during 1916 in the 9-month period under discussion.

² Decrease.

³ This jobbing company purchased no coal of the railroad coal company referred to in calendar year 1916.

⁴ No sales prior to December, 1915.

⁵ Tidewater shipments only are shown in the distribution. Total shipments from tidewater and all rail to this jobber were 40,418 tons in calendar year 1916 and none in 1915.

⁶ Tidewater shipments only are shown in the distribution. Total shipments from tidewater and all rail to this jobber were 24,122 tons in calendar year 1916 and none in 1915.

Jobbers A, B, and C took no coal in 1916 from the railroad coal company referred to, and are removed from the discussion. Jobber D took 37,979 tons less of all sizes in the last four months of 1916 than in 1915, but 50 per cent of his purchases (some 16,000 tons) during October-December, 1916, were domestic sizes of mixed red and white ash anthracite.

Jobber E took 5,221 tons or 7 per cent less in the September-December period, 1916, than during this period in 1915, but took 22,392 tons or 15 per cent more during April-December, 1916, than in

1915, and for the calendar year took 54,569 tons more than in 1915, an increase of 30 per cent. Practically all of the coal sold this jobber was of domestic sizes.

The purchases of jobber F show an increase of 35,897 tons for the April-December period of 1916, practically all new business for the railroad coal company, as this jobber took but 1,511 tons during the calendar year 1915. In September-December 27,579 tons more were purchased by this jobber than during the same period of 1915. Of the 27,173 tons sold this concern in October-December, 1916, 22,057 tons were prepared red and white ash coal, and 11,000 tons of this were delivered in November, 1916, the month of most active demand.

Jobber G purchased 18,615 tons of tidewater shipments in the April-December period, 1916, and 5,402 tons of tidewater shipments in September-December, 1916. In the calendar year this jobber took 40,418 tons of both all-rail and tidewater shipments, all of which was new business, as this jobber purchased no coal from the railroad coal company in question during 1915.

Jobbers H, I, and J purchased an aggregate of 7,729 tons during April-December, 1916, and of this total jobber H took 2,084 tons in September. None of these jobbers received coal from the railroad coal company under discussion in 1915.

Assuming that at least an equal quantity of coal had to be placed in 1916, the fact that jobbers A and B did not buy any coal from this company during the year released a tonnage of 272,294 tons for the April-December period, 73,383 tons for the September-December period, and 26,263 tons for November and December. On this basis all but 5,648 tons of the November-December tonnage which was released through jobbers A and B not taking coal was placed with jobbers who did not buy of the company in 1915 or who increased their purchases during those months over November-December, 1915.

It should be added that a principal sales agent of this railroad coal company stated that following April 1, 1916, he discouraged the sale of domestic sizes to jobbers.

Another railroad coal company sold the following quantities (gross tons) of coal to certain jobbers, indicated in the table as Jobbers A to E, but different concerns from those just discussed except in one case.

Jobber.	Year.	April to August.	September.	October.	November.	December.	Total September to December.	Grand total.
		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
A.....	1915	62,185	15,671	17,606	8,299	11,842	53,418	115,603
	1916	53,704	13,364	7,243	7,731	8,666	37,004	90,708
Increase or decrease, 1916.....		¹ 8,481	¹ 2,307	¹ 10,363	¹ 568	¹ 3,176	¹ 16,414	¹ 24,895
B.....	1915	12,137	4,389	1,381	1,525	1,077	8,372	20,509
	1916	11,655	1,262	1,355	1,768	2,426	6,811	18,466
Increase or decrease, 1916.....		¹ 482	¹ 3,127	¹ 26	243	1,349	¹ 1,561	¹ 2,043
C.....	1915	10,073	1,457	3,053	4,342	4,257	13,109	23,182
	1916	10,414	1,932	1,310	2,211	3,711	9,164	19,578
Increase or decrease, 1916.....		341	475	¹ 1,743	¹ 2,131	¹ 546	¹ 3,945	¹ 3,604
D.....	1915	8,298	2,083	2,382	3,648	1,944	10,057	18,355
	1916	7,162	1,691	2,073	2,335	2,249	8,348	15,510
Increase or decrease, 1916.....		¹ 1,136	¹ 392	¹ 309	¹ 1,313	305	¹ 1,709	¹ 2,845
E.....	1915	9,747	530	3,262	2,650	3,280	9,722	19,469
	1916	12,169	1,600	8,218	14,411	13,904	38,133	50,302
Increase or decrease, 1916.....		2,422	1,070	4,956	11,761	10,624	28,411	30,833

¹ Decrease.

Jobber A, during the period April–December, 1916, received from this railroad coal company 22 per cent less coal than in the same period of 1915. During September–December, 1916, the jobber received 31 per cent less than in the corresponding months of 1915.

Jobber E, during the period April–December, 1916, received 30,833 tons more from this railroad coal company than in the same period of 1915, an increase of 158 per cent. During September–December, 1916, this jobber purchased 28,411 tons more than in the same months of 1915, an increase of 292 per cent. In November–December, 1916, when the anthracite market situation was most acute, this jobber's tonnage from the railroad coal company concerned increased 22,385 tons over November–December, 1915, or 377 per cent.

Tonnages sold to A, B, C, and D combined decreased 23,629 tons in September–December, 1916, and 33,387 tons in April–December, 1916, but the increased tonnage taken by Jobber E alone during September–December, 1916, was 4,782 tons greater than the decrease in combined purchases of A, B, C, and D during that period. The tonnage taken by Jobber E in the period April–December, 1916, was only 2,554 tons short of the decrease in tonnage sold Jobbers A, B, C, and D combined during the same period.

A trestle and jobbing concern in the Middle West purchased coal from four different railroad coal companies during September–December, 1915 and 1916, as shown in the following table, the four companies being indicated by the letters A to D:

Jobber.	Year.	September.	October.	November.	December.	Total.
		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
A	1915	1,208	443	133	89	1,873
	1916					
Increase or decrease, 1916.....		¹ 1,208	¹ 443	¹ 133	¹ 89	¹ 1,873
B	1915	267	2,691	2,394	2,807	8,159
	1916	520	257	211	151	1,139
Increase or decrease, 1916.....		253	¹ 2,434	¹ 2,183	¹ 2,656	¹ 7,020
C	1915	1,753	4,323	4,323	3,045	13,444
	1916	2,083	2,088	4,609	4,343	13,123
Increase or decrease, 1916.....		330	¹ 2,235	286	1,298	¹ 321
D	1915	1,479	3,687	3,309	3,930	12,405
	1916	2,792	4,812	6,272	9,286	23,162
Increase or decrease, 1916.....		1,313	1,125	2,963	5,356	10,757

¹ Decrease.

This firm received no coal from company A in 1916 during the period under discussion, and decreased its purchases of company B. Its purchases of company C decreased to a negligible extent for the four-month period of 1916, but increased 1,584 tons, or 21 per cent, in November–December, 1916, over the same months of 1915. Purchases of this jobber from company D increased 10,757 tons, or 87 per cent, in the last four months of 1916 over the corresponding period in 1915. In November–December, 1916, this jobber received 8,319 tons more of company D than in the same months of 1915, an increase of 115 per cent.

The purchases of another trestleman and jobber from a railroad coal company, while being about the same in the total period April–December, 1916, as in the same months of 1915, was considerably less

from April to August and considerably more from September to December.

Year.	April to August.	September.	October.	November.	December.	Total, September to December.	Total, April to December.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1915.....	12,921	745	2,407	3,414	3,248	9,814	22,735
1916.....	8,441	1,906	3,463	4,002	3,662	13,033	21,474
Increase or decrease, 1916.	¹ 4,480	1,161	1,056	588	414	3,219	¹ 1,261

¹ Decrease.

The firm's purchases from this company decreased 4,480 tons during the April-August period of 1916, and increased 3,219 tons or 33 per cent during September-December.

Another western trestle man and jobber purchased the following quantities of anthracite from a railroad coal company during the nine-month period April-December, 1915 and 1916:

Year.	April to August.	September.	October.	November.	December.	Total, September to December.	Total, April to December.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1915.....	74,040	5,314	22,069	24,050	26,975	78,408	152,448
1916.....	88,793	18,599	31,793	29,857	34,259	114,508	203,301
Increase, 1916.	14,753	13,285	9,724	5,807	7,284	36,100	50,853

It will be noted that this company increased its purchases from the railroad coal company in question by 33 per cent during the April-December period of 1916, and during the last four months of 1916 received 36,100 tons, or 46 per cent, more than in those months of 1915.

The 12 jobbers and trestle operators considered in the foregoing tables who purchased coal from the railroad coal companies concerned collectively increased their purchases from 461,630 in the last four months of 1915 to 532,211 tons in those months of 1916, a difference of 70,581 tons, or 15 per cent. During the month of November, 1916, when the demand for anthracite was greatest and the market most active, these jobbers purchased 148,147 tons in comparison with 118,539 tons during November, 1915, an increase of 25 per cent.

From the incomplete data at hand covering this phase of coal distribution the Commission can not state that increased sales by railroad coal companies to jobbers were general throughout the period of September-December, 1916. Analysis of the foregoing tables shows, however, that certain jobbers at least were able to increase their purchases of railroad-company coal very considerably during the panic period. This tendency toward increase of the jobbers' supply is significant when considered in connection with the urgent necessities of

retailers during that period and the fact that the companies were giving retailers less tonnage than normal.

Margins of jobbers and wholesalers on railroad-company coal.—Two railroad coal companies stated to the Commission that they restrict jobbers to whom they sell their coal to a margin of not more than 10 cents per ton above circular prices. They stated that continued business relations between them and the jobbers concerned are contingent upon adherence to this margin of 10 cents per ton by the latter. The general agent of one of these companies advised the Commission that "its customers positively and categorically understand that if they exceed such advance on our coal it means an immediate end of any further business relations with this company."

On coal purchased from the company whose general agent is quoted in the preceding paragraph, a prominent jobber realized gross margins as follows during the last four months of 1916:

	1916.				Average, 4 months.
	September.	October.	November.	December.	
Weighted average of all sizes.....	\$0.14	\$0.12	\$0.19	\$0.16	\$0.15

It will be noted that throughout the period under discussion this jobber enjoyed margins greater than the advance at which the railroad coal company expected him to sell. In November, 1916, the month of greatest demand during the panic period, his margin was 90 per cent in excess of that allowed by the railroad coal company referred to.

Another large jobber to whom this railroad coal company sells important quantities of anthracite, stated to the Commission that he does not consider his margin on coal from this company restricted to 10 cents per ton, and that he sells it at any price that he desires and can obtain.

One jobber who purchases 90 per cent of his coal at a discount of 10 cents a ton from a railroad coal company which claims to limit the jobbers' margin to 10 cents per ton, stated that while he does not generally make a profit exceeding 20 cents per ton on prepared sizes of "company" coal, he does not understand that he is limited to this gross margin on steam sizes.

Information obtained by the Commission from the records of this jobber shows that his gross margins on specific sales of prepared sizes of "company" coal frequently were 25, 30, 35, and 40 cents per gross ton.

Within the scope of this investigation it was not practicable to trace all pertinent sales of the two railroad coal companies which claimed that the margins of jobbers to whom they sold coal were limited to 10 cents above circular prices. The foregoing facts indicate, however, that the limitation referred to is not always observed.

Certain other jobbers handling coal of other railroad coal companies realized margins on "company" coal during September to December, 1916, as indicated in the table following.

	September.	October.	November.	December.	Average, 4 months.
Jobber A:					
Prepared sizes.....	\$0.26	\$1.33	\$0.38	\$0.92	\$0.67
Steam sizes.....		1.02	.12	.10	.07
Weighted average, all sizes.....	.26	.13	.13	.22	.14
Jobber B, all sizes.....	1.08	.25	.17	.36	.16
Jobber C, all sizes.....		.44	1.91		1.17

¹ Loss.

Thus 10 of these 13 gross monthly margins of jobbers on company coal are in excess of 10 cents. Margins of Jobber A on prepared sizes in October and December, and of Jobber C on all sizes in November, were extremely high, and incidentally show that railroad coal company anthracite reached retailers at high premium prices.

A wholesale concern which transships coal at its dock handles a large quantity of "company" coal. On this coal, which bears a discharging and reloading expense of not more than 20 cents a ton, the following gross margins were realized in September-December, 1916. Practically all of this coal was prepared sizes.

September.	October.	November.	December.	Average, 4 months.
\$0.62	\$0.85	\$1.48	\$0.95	\$1.01

During the period April-August, 1916, this wholesaler's margin on the same class of business averaged \$0.33 per gross ton. Gross margins of this concern during the last four months of 1916 therefore exceeded the April-August margin by 87 per cent, 157 per cent, 348 per cent, and 206 per cent, respectively, and it will be noted that during November, the month of greatest stress, the margin was highest. The figures concerning this wholesale concern show also that some "company" coal reached retailers at high premium prices. This wholesaler, of course, has to bear expenses covering the cost of discharging and transshipping coal, amounting, as stated, to not more than 20 cents per ton, thus allowing him for the April-August period a margin of about 13 cents exclusive of these. When it is considered that these incidental expenses were not appreciably greater during the September-December period, it will be apparent that the net increase in margin over the earlier period was extraordinarily great.

Two jobbers in the Middle West, where normal jobbing margins are from 20 to 25 cents per ton, had the following margins on railroad company coal during September-December, 1916:

	September.	October.	November.	December.	Average, 4 months.
Jobber A:					
Prepared sizes.....	\$0.28	\$0.28	\$0.28	\$0.44	\$0.31
Steam sizes.....	.29	.28			.29
Weighted average, all sizes.....	.28	.29	.28	.44	.31
Jobber B, weighted average, all sizes.....	.003	.03	.85	1.09	.41

Another western jobber realized the following margins on railroad company coal during September-December, 1916:

	September.	October.	November.	December.	Average, 4 months.
Prepared sizes.....	\$0.37	\$0.36	\$0.36	\$0.45	\$0.38
Steam sizes.....	.29	.28	.40	.70	.44
Weighted average, all sizes.....	.36	.34	.37	.50	.39

Very much higher margins and the correspondingly high premiums on railroad company coal were realized by a western dock man during the panic period. The normal margin for the western dock men is 78 cents, of which about 50 cents is said to be necessary to cover the physical cost of discharging, storing, and reloading the coal, while the remaining 28 cents represents the margin necessary to cover the jobbing function of selling the coal and the credit risk. This dock man's margins follow:

	September.	October.	November.	December.	Average, 4 months.
Weighted average of all sizes.....	\$0.98	\$1.20	\$1.72	\$2.56	\$1.39

From September this dock man progressively increased his margin on company coal until the December margin was 161 per cent in excess of September.

The functions of trestlemen are somewhat different from middlemen either of the "jobber" or of the "dock man" class. The trestlemen own or maintain trestles, at which coal arrives all rail, is dumped into the trestle pockets, and thence into the wagons of retailers. Their normal gross margins are between 40 and 50 cents per gross ton on all sizes of anthracite.

The following table presents the gross margins of a western trestleman on railroad company coal:

Sizes.	September.	October.	November.	December.	Average, 4 months.
Prepared.....	\$0.53	\$0.52	{ 1 to 15, \$0.52 16 to 30, .79 }	\$0.81	\$0.65
Steam.....	.33	.64	{ 1 to 15, .66 16 to 30, .37 }	.08	.40
Weighted average, all business.....	.49	.55	{ 1 to 15, .55 16 to 30, .72 }	.64	.60

Assuming a margin of 45 cents to be a normal margin, the weighted average margin for September obtained by the above trestleman exceeded this amount by 9 per cent, increasing to 22 per cent in October and the first half of November, reaching the maximum of a 60 per cent increase in November and declining to an increase of 42 per cent in December. The weighted average of all four months exceeded the normal margin by 33 per cent.

The following table presents the margins realized by another trestleman in the same city on "company" coal:

Sizes.	September.	October.	November.	December.	Average, 4 months.
Prepared	\$0.47	\$0.48	{ 1 to 15, \$0.47 16 to 30, .75 }	\$0.78	\$0.61
Steam .....	.47	.48	{ 1 to 15, .47 16 to 30, .75 }	.74	.60
Weighted average, all business .....	.47	.48	{ 1 to 15, .47 16 to 30, .75 }	.73	.61

The foregoing table shows that this trestleman realized a margin but slightly in excess of 45 cents during September, October, and the first half of November—namely, an increase of approximately 4 per cent, 7 per cent, and 4 per cent, respectively. From the 15th of November to the end of the year this trestleman took advantage of the panic conditions and realized a margin during the latter part of November of 75 cents per ton or an increase of 67 per cent. He obtained a margin of 78 cents per ton in December, or an increase of 73 per cent over the normal margin, and for the period of four months his margin averaged 61 cents, or an increase of 35 per cent over the normal.

Gross margins realized by a third trestleman in the same city, also on "company" coal, are shown in the following table:

Sizes.	September.	October.	November.	December.	Average, 4 months.
Prepared	\$0.73	\$0.61	{ 1 to 15, \$0.61 16 to 30, .88 }	\$0.83	\$0.73
Steam	¹ 1.18	1.08	{ 1 to 15, .49 16 to 30, .44 }	.25	.30
Weighted average, all business .....	.52	.65	{ 1 to 15, .60 16 to 30, .85 }	.78	.69

¹ Loss.

Gross margins obtained by this trestleman on steam sizes show a wide fluctuation. In September he lost \$1.18 per gross ton, while in October he realized a profit of \$1.08 per gross ton. However, the steam sizes represented but 10 per cent of his business.

The weighted average of all of his business shows an increase during the last four months of 53 per cent above an assumed normal margin of 45 cents per gross ton.

From the foregoing tables showing margins realized on railroad company coal by jobbers or other middlemen at different points, it is evident that the identity of railroad company coal as such did not preclude its resale during the panic period at prices which yielded gross margins considerably in excess of those usually realized during normal periods. It does not appear that railroad coal companies generally attempted to keep jobbers' margins on "company" coal strictly to normal during the panic period, or that such attempts were successful if they were made.

While some of the margins enjoyed by jobbers and other middlemen on "company" coal were very high, the market no doubt would have absorbed higher margins during the panic months. Higher

margins and greater premiums generally were obtained by jobbers on the coal of independent companies.

The tables above give weighted average margins made on railroad company coal by the particular jobbers and middlemen concerned. These average margins in many instances include specific sales at very much higher prices than the average. The table given in another connection on page 132 shows a few instances of railroad-company coal reaching retailers at exceedingly high premiums through jobbers. Thus item No. 11 in that table was sold to a retailer at \$10.15 per ton, a premium of \$4 per ton; items 26, 36, and 38 were sold by jobbers to retailers at \$9.65, a premium of \$3.50 per ton, and item No. 134 reached the retailers at a price of \$9, or \$3.15 per ton premium. In each of the items cited the railroad coal company sold the coal at circular.

In a normal market jobbers who resell railroad-company coal to retailers usually realize a margin of 10 cents per gross ton above circular prices. The railroad-coal companies sell coal to both jobbers and retailers at circular prices, but demand payment within 30 days of shipment. Since many retailers can not meet the terms of the railroad companies with respect to settlement they are disposed to pay jobbers, who grant them about 60 days time, an advance of 10 cents above company circulars. This accommodation in most cases explains the only function and usefulness of jobbers in handling railroad-company coal, since they assume the credit risk involved.

Elsewhere in this report it has been pointed out that railroad coal companies did not sell coal at premium prices during the panic period, and that they customarily adhere to this selling policy. Although the circular prices at some points were increased slightly during the fall and winter of 1916 no case was ascertained in which direct customers of the railroad coal companies were charged more than the circular prices.

Complaint against dock companies at the head of the Lakes.—During the progress of the investigation the attention of the Commission was called to a practice adopted about December 1, 1916, by one of the dock companies at the head of the Great Lakes requiring that a retailer ordering anthracite coal should order an equivalent tonnage of bituminous coal, at high prices, as a condition precedent to the acceptance of his anthracite order.

The reasons assigned by one of the companies for this practice, which appears to have been put into effect by several of the dock companies, were as follows: All the coal, both anthracite and bituminous, shipped to the dock comes by water during the period of navigation. The supply on hand at the end of the navigable season in the fall must suffice until navigation opens in the spring. The storage capacity of the dock is limited to certain tonnages of each kind of coal. During the early winter of 1916 the demand for anthracite coal increased in a larger proportion than did the demand for bituminous. The company was unable to secure the required number of railroad cars, and to fill the orders for anthracite coal received would have necessitated shipping many cars only partially filled. Furthermore, the company wished to balance, as far as possible, the loading operations at the dock for both kinds of coal. To have filled the orders for coal as received would have meant an early depletion of

the supply of anthracite coal with a surplus of bituminous coal still on hand at the dock.

In the case of the company complained of it was found that it sold anthracite as a factor of the mining company on a fixed gross margin of 70 cents a ton; whereas it sold bituminous, in its own interest, at increasingly profitable prices during the fall and winter. The reasons assigned by this company for the adoption of this practice are to a certain extent valid. Car shortage was a problem to be dealt with. During the early winter there appears to have been a greater increase in the demand for anthracite than for bituminous. But unquestionably the fact of relative profits greatly influenced the company in the adoption of the practice. The margins on anthracite coal remained constant at the commission figure of 70 cents. But while the cost of the bituminous coal remained practically the same, the selling price was constantly increasing. When the requirements of the company under this practice were submitted to a retailer, he was quoted the circular or market prices for bituminous coal. The resulting high margins made the transaction a very lucrative one to the company. In September the largest per ton margin between the average cost and the circular price was \$2.33; in October it was \$2.07, \$2.32, and \$3.07 respectively for three different price circulars; while in December it rose to \$5.07. Much of the bituminous coal sold by this company was sold below circular, under contract or agreement, yet the per ton margin between the average cost (including degradation cost) and the average selling price steadily increased. In September, disregarding margins on screenings, it ranged from 19 cents to \$2.24; in October from 34 cents to \$1.81; in November from 30 cents to \$3.12, and in December from 13 cents to \$4.75. These margins are for all kinds of coal. For the more general grades and sizes of coal the minimum margin was much higher than those given above.

Whatever bituminous was sold at the market prices by reason of this practice, realized a per ton profit to this dock company of four to five or six times that realized from the sales of anthracite.

The Commission strongly condemns this practice of conditioning the sale of one kind of coal on taking another kind at a higher price. It imposes an undue hardship upon retail purchasers and was, in the Commission's judgment, an unjust and unnecessary practice, adopted for the purpose of forcing sales of bituminous coal at exorbitant prices.

SECTION 9. COST OF RETAILING COAL AND EXTENT OF "PREMIUM" ANTHRACITE.

The agents of the Commission secured data on conditions in the anthracite retail trade in New England, New York City, Buffalo, Niagara Falls, Rochester, Detroit, Chicago, Milwaukee, Minneapolis, and St. Paul. No detailed study was made in Philadelphia, Baltimore, and Washington because the general level of prices in those cities did not increase to any marked extent during the fall and winter, these markets being principally supplied by railroad company coal.

Before taking up the prices charged by retail dealers for anthracite, some consideration should be given to the cost of retailing coal,

and to the extent to which the price paid by dealers for anthracite delivered at their yards was abnormally high.

Time did not permit an extensive study of the costs of doing a retail coal business, consequently gross margins only are shown, and increases during the panic period over normal gross margins are discussed.

However, as a general check on this method, and in order to indicate to the public the nature and relative importance of the different items of cost in retailing coal, the Commission has secured and gives herewith the costs of a few representative retail dealers.

Cost of retail distribution of anthracite coal.—No detailed information was secured with respect to the cost of retail distribution of anthracite. A general lack of uniformity was found in the methods of recording costs by different retailers and some of the classifications were arbitrary. Most retailing establishments, moreover, handle both anthracite and bituminous coal and many of them frequently sell wood and miscellaneous materials, either fuel or building supplies. Many of the items of cost are expenditures connected with the handling of the tonnage of coal received during a given period and not with the quantity sold. The tonnage received and the tonnage sold during the period are usually unequal and at certain times of the year differ greatly. The impracticability is therefore apparent of determining with precision the cost per ton of handling coal. The costs, as shown here, have been calculated on the basis of the tonnage of coal sold, including both anthracite and bituminous.

For only one retailer investigated was the specific cost of retailing anthracite separated from the total costs. With respect to the retail distribution of anthracite substantial differences in costs as between different establishments may be due to variations in the proportion of the large or the small sizes handled by each and consequent differences in the amount of degradation and shrinkage. The expenses per ton of handling and storage likewise vary as between tidewater yards receiving barge deliveries and inland yards receiving coal by rail only, and as between yards which because of differences in the accessibility to the sources of supply are compelled to carry in yard different proportions of the total volume annually handled. Under the substantially similar conditions, however, which prevail as between yards in the same city these expenses do not as a rule show wide variations.

Because of the lack of uniformity of accounting methods and of the differences in the character and volume of business transacted, no attempt has been made to establish comparative costs as between different operations. Only the changes in costs for identical establishments are shown. Although these costs may not be representative of the industry as a whole, they furnish a general index with respect to recent changes in the conditions and costs of retailing anthracite.

One company in New England showed the following record of costs during the period from 1898 to 1915, inclusive. With the exception of two years the tonnage sold fluctuated between 102,000 and 125,000 tons. During the two years in which a smaller tonnage was handled the costs were proportionately increased. The fiscal year in the coal industry begins with the 1st of April.

Cost of doing business.

Year.	Tonnage.	Cost of handling per ton.	Year.	Tonnage.	Cost of handling per ton.
1898.....	110,219	\$1.04	1907.....	104,544	\$1.40
1899.....	122,640	.996	1908.....	101,433	1.49
1900.....	121,494	1.05	1909.....	99,007	1.55
1901.....	125,131	1.052	1910.....	103,870	1.47
1902.....	82,571	1.49	1911.....	114,556	1.48
1903.....	111,022	1.30	1912.....	106,890	1.54
1904.....	105,955	1.34	1913.....	112,214	1.65
1905.....	107,102	1.30	1914.....	122,214	1.65
1906.....	102,144	1.39	1915.....	122,105	1.68

An inland company in New England receiving rail anthracite only showed a somewhat higher level of costs of delivering coal per ton during the period 1910 to 1916, inclusive, as follows: 1910, \$1.80; 1911, \$1.76; 1912, \$1.78; 1913, \$1.67; 1914 (includes 9 months only, Apr. 1 to Dec. 31), \$2.37; 1915 (calendar year), \$2.02; 1916 (calendar year), \$2.19.

The cost of delivery per ton regularly varies substantially with the volume of business handled. Activity in the coal market likewise is to a large extent dependent upon general business conditions as well as upon the uncertainties of season and climate. Fluctuations in the tonnage handled, reflected in part in changes in the costs per ton of handling coal, therefore, are normally to be expected.

Distribution of retailing costs.—In the majority of retail operations investigated the operating expense, including the expenses of salaries, labor, teaming, or trucking and sundry yard expenses and repairs, is approximately 60 per cent of the total cost of handling all coal. Administrative and selling expenses constitute between 15 and 20 per cent, and general expenses, including the overhead, depreciation, interest, and discounts and miscellaneous charges, between 20 and 25 per cent. Wages and yard salaries represent probably about 50 per cent of the total costs; teaming and trucking expenses not less than 15 per cent.

For one establishment having yards on tidewater in New England and handling on the average approximately 50,000 net tons annually, the exclusively operating expenses were found to show a substantial decline after 1912 and 1913. Per net ton they are as follows:

	1911	1912	1913	1914	1915
Operating expenses (exclusively).....	\$0.69	\$0.75	\$0.69	\$0.65	\$0.64
Operating expenses plus repairs.....	.79	.80	.773	.71	.705
Operating expenses plus repairs and depreciation.....	1.16	1.15	1.317	.97	1.09

These figures are for the fiscal years, respectively, beginning with April 1, 1911, and ending with March 31, 1916. The data for the fiscal year 1916 or for a part of it has not been available.

For the inland coal markets of New England the most complete record of prices, costs of operation, and profits was secured for a large company handling coal only, including both bituminous and anthracite. The gross tonnage handled was 77,178 tons in 1915 and 72,520 tons in 1916. Approximately 20 per cent was anthracite. During the period from April to December, 1916, the operating costs increased from \$0.89 to \$1.38 per ton handled. Between April and November, however, the increase was only \$0.28 per ton. The monthly tonnage handled was almost uniform throughout the period.

The most substantial increases in cost are in the items classified as discharging and delivery expenses, respectively. The general expenses declined. Between September and December, 1916, the expense per ton for delivery remained approximately constant, the increase during four months being only 3 cents. But during the same period the discharging expense per ton increased from \$0.26 to \$0.43, although the element of wages probably constitutes no greater proportion of this expense than it does of the item of delivery which showed almost no increase. The monthly operating costs per ton and the net profits show much variation throughout the entire period covered in the following table:

	Jan. 1 to Mar. 31, 1915.	Apr. 1 1915, to Mar. 31, 1916.	April, 1916.	May, 1916.	June, 1916.	July, 1916.	August, 1916.	September, 1916.	October, 1916.	November, 1916.	December, 1916.
Gross tons sold.....	23,721	74,836	5,687	5,589	4,989	5,669	5,846	5,371	5,987	5,888	5,612
Selling price.....	\$4.67	\$5.09	\$5.58	\$5.42	\$5.91	\$6.00	\$5.88	\$6.28	\$6.29	\$6.11	\$6.55
Cost of coal.....	3.72	4.07	4.44	4.60	4.53	4.67	4.98	5.29	4.78	4.58	4.82
Gross profits.....	.95	1.02	1.14	.82	1.38	1.33	.90	.99	1.51	1.53	1.73
General expense.....	.36	.37	.20	.28	.29	.28	.26	.28	.31	.30	.30
Discharging.....	.17	.19	.33	.30	.24	.31	.27	.26	.25	.19	.43
Delivery.....	.20	.24	.30	.39	.30	.40	.37	.52	.50	.54	.55
Yard expense.....	.02	.05	.06	.05	.09	.08	.08	.09	.12	.13	.10
Total expenses...	.75	.85	.89	1.02	.92	1.07	.98	1.15	1.18	1.16	1.38
Net profits.....	.20	.17	.25	1.20	.46	.26	1.08	1.16	.33	.37	.35

¹ Loss.

The direct expense of discharging coal is less for the wharf yards than for the inland yards. But other wharf labor and the expense of wharf maintenance are usually a substantial addition to the discharging cost. Detailed data were secured for only one large wharf yard in New England, but this yard's labor costs in operating expenses increased but little between April, 1915, and December, 1916, and the recorded labor expense by itself in the discharging of coal decreased during the same period. The operating expenses per ton for the last six months of 1916 were less than 2 per cent higher than those for the corresponding months of 1915, and the total costs per ton for the same period, including operating, administrative, maintenance, selling, and general expenses were more than 2 per cent higher in 1915 than in 1916.

The itemized monthly expenses as recorded by this company are shown in the following tables for the period April, 1915, to December, 1916, inclusive. These data were secured by reducing the total expenses to a per ton basis for each month, respectively, during the period. As is indicated in the tables the tonnage handled during the corresponding months was substantially greater in 1916, with the exception of December. With respect to this month the tonnage in 1915 was almost identical.

The total tonnage of coal handled by this company during both 1915 and 1916 was approximately 175,000 gross tons, of which 40 per cent was of anthracite. In addition to the coal these yards carried regularly a stock of wood and masonry supplies. But the business with respect to these miscellaneous items constituted only a relatively small proportion of the total business transacted.

Costs per net ton, April-December, 1915.

	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Net tons sold	10,266	8,272	10,700	16,142	14,102	11,529	15,252	13,266	15,416
<i>Operating expenses.</i>									
Discharging labor	\$0.049	\$0.059	\$0.048	\$0.045	\$0.075	\$0.073	\$0.021	\$0.036	\$0.047
Other wharf labor .....	.111	.145	.151	.098	.111	.106	.113	.109	.118
Motor-truck wages .....	.020	.023	.023	.015	.015	.020	.016	.018	.024
Teamsters' wages .....	.194	.213	.218	.130	.189	.192	.157	.175	.197
Hired teams .....	.030		.023	.066	.109	.040	.103	.074	.078
Housing labor .....	.029	.030	.041	.077	.061	.047	.060	.058	.063
Stable labor .....	.014	.014	.013	.006	.011	.010	.007	.008	.010
Hay and grain consumed .....	.117	.138	.108	.078	.093	.118	.070	.083	.080
Towboat labor .....	.012	.010	.015	.007	.012	.008	.006	.005	.006
Power-house expense .....	.007	.011	.014	.005	.007	.009	.004	.006	.005
Yard supervision .....	.038	.048	.046	.026	.033	.033	.022	.024	.027
Water .....	.023	.029	.022	.017	.017	.021	.016	.019	.018
Demurrage .....	.001		(¹)	(¹)	(¹)	(¹)	(¹)		(¹)
Discharging premium									
Auto oil .....	.009	.012	.011	.007	.008	.016	.012	.016	.010
Expenses not otherwise provided for ..	.004	.001	.001	.002	.003	.003	.002	.004	.008
Total .....	.658	.733	.734	.579	.744	.696	.609	.635	.691
<i>Maintenance.</i>									
Wharf repairs	(¹)		.001	.005	.006	.002			
Machinery and fixture repairs .....	.020	.003	.004	.006	(¹)	.001	.027	.007	.006
Building and office repairs .....	.007	.001	.003	.001	.001	(¹)	.001		.001
Repairs and renewals—miscellaneous equipment .....	.014	.003	.022	.013	.007	.014	.009	.012	.008
Wagon repair .....	.014	.033	.010	.021	.009	.017	.010	.011	.011
Harness repair .....	.003	.011	.001	.001	.002	.004	.002	.001	.010
Horseshoeing .....	.011	.017	.007	.011	.011	.011	.009	.011	.016
Motor-truck repairs .....	.008	.025	.006	.008	.012	.009	.007	.003	.030
Expenses not otherwise provided for ..						.003			.001
Total .....	.077	.093	.054	.066	.046	.061	.065	.045	.083
<i>Selling expense.</i>									
Salaries selling and credit department ..	.003								
Expenses selling and credit department ..	.031	.002	.001	.002	.001	.002	(¹)	.001	(¹)
Commissions and soliciting .....		.026	.011	.006	.016	.043	.021	.017	.018
Advertising									
Credit reports									
Expenses not otherwise provided for ..									
Total .....	.034	.028	.012	.008	.017	.045	.021	.018	.018
<i>General expense.</i>									
Yard office clerks .....	.057	.071	.074	.043	.049	.051	.039	.046	.051
Yard office expenses .....	.003	.003	.003	.002	.002	.002	.002	.003	.002
Rent .....	.030	.049	.029	.019	.022	.028	.020	.024	.020
Heat and light .....	.023	.005	.002	.003	.005	.004	.004	.007	.004
Insurance .....	.047	.058	.045	.030	.036	.045	.034	.039	.034
Taxes .....	.052	.064	.050	.033	.038	.061	.037	.042	.036
Telephone and telegraph .....	.004	.008	.006	.005	.005	.003	.005	.007	.005
Printing and stationery .....					.001	.002	.001	.001	.001
Legal expenses									
Expenses not otherwise provided for ..								(¹)	
Total .....	.216	.258	.209	.135	.158	.196	.142	.169	.153

¹Less than 1 mill.²Credit.

Costs per net ton, January–December, 1916.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Net tons sold.....	17,814	15,159	20,641	15,301	13,405	17,160	19,983	22,347	16,933	18,528	13,738	15,286
<i>Operating expenses.</i>												
Discharging labor.....	\$0.045	\$0.073	\$0.039	\$0.068	\$0.095	\$0.044	\$0.060	\$0.068	\$0.075	\$0.039	\$0.044	\$0.039
Other wharf labor.....	.108	.123	.095	.106	.112	.117	.121	.098	.114	.145	.153	.155
Motor-truck wages.....	.018	.031	.019	.021	.029	.020	.018	.015	.020	.023	.024	.025
Teamsters' wages.....	.142	.221	.143	.150	.190	.143	.138	.120	.151	.170	.177	.170
Hired teams.....	.155	.137	.217	.085	.010	.102	.105	.129	.045	.122	.065	.183
Housing labor.....	.068	.060	.071	.045	.043	.054	.084	.072	.025	.050	.020	.039
Stable labor.....	.006	.012	.007	.010	.014	.019	.009	.008	.010	.012	.011	.014
Hay and grain consumed...	.072	.077	.057	.092	.096	.049	.066	.052	.067	.057	.081	.068
Towboat labor.....	.008	.006	.004	.007	.008	.005	.006	.008	.007	.007	.013	.007
Power-house expense.....	.004	.005	.002	.010	.004	.003	.005	.004	.002	.004	.007	.004
Yard supervision.....	.019	.028	.016	.018	.038	.024	.024	.022	.023	.023	.026	.023
Water.....	.014	.017	.012	.043	.017	.023	.013	.011	.016	.013	.020	.018
Demurrage.....	.001	(¹)	.001	(¹)	.001	(¹)	.001	(¹)	(¹)	.001	.003	.001
Discharging premium.....				(¹)				(¹)		² .001		
Auto oil.....	.005	.028	.016	.019	.030	.030	.008	.013	.019	.018	.026	.016
Expenses not otherwise provided for.....	.004	.006	.005	.003	.002	.001	.002	.002	.001	.004	.003	.004
Total.....	.669	.824	.704	.677	.689	.634	.660	.622	.575	.692	.673	.766
<i>Maintenance.</i>												
Wharf repairs.....			.023				.004		(¹)	.040		.012
Machinery and fixture repairs.....	.003	.005	.006	(¹)	.003	.003	.001	.003	.036	.012	.012	.002
Building and office repairs..	(¹)	(¹)	.005	.002	.006	.003	(¹)	.005	.006	(¹)	.002	² .001
Repairs and rene—miscellaneous equipment.....	.003	.010	.004	.006	.013	.011	.007	.004	.010	.010	.017	.024
Wagon repairs.....	.010	.018	.007	.007	.015	.008	.016	.010	.015	.008	.020	.003
Harness repairs.....	.001	.003	.002	.002	.007	.004	.005	.001	.003	.004	.002	.005
Horseshoeing.....	.007	.015	.008	.008	.012	.008	.006	.003	.014	.009	.010	.007
Motor-truck repairs.....	.022	.024	.018	.028	.014	.015	.014	.031	.010	.015	.039	.013
Expenses not otherwise provided for.....		.001	(¹)									
Total.....	.046	.076	.073	.053	.070	.052	.053	.057	.094	.098	.093	.065
<i>Selling expenses.</i>												
Salaries, selling and credit department.....												
Expenses, selling and credit department.....	.001	(¹)	(¹)	.002	.002	.001		(¹)	(¹)	(¹)		(¹)
Commissions and soliciting.	.014	.014	.009	.027	.009	.018	.020	.020	.029	.033	.029	.016
Advertising.....												
Credit reports.....												
Expenses not otherwise provided for.....												
Total.....	.015	.014	.009	.029	.011	.019	.020	.020	.029	.033	.029	.016
<i>General expense.</i>												
Yard-office clerks.....	.035	.052	.031	.041	.061	.039	.039	.033	.042	.045	.049	.044
Yard-office expense.....	.002	.002	.003	.002	.003	.003	.005	.004	.002	.003	.003	.003
Rent.....	.017	.022	.015	.027	.024	.038	.026	.024	.029	.029	.037	.033
Heat and light.....	.010	.006	.005	.004	.004	.002	.003	.003	.005	.004	.007	.006
Insurance.....	0 9	.034	.025	.034	.038	.030	.026	.023	.030	.028	.038	.034
Taxes.....	.031	.037	.034	.037	.042	.043	.031	.028	.037	² .001	.042	.034
Telephone and telegraph.....	.005	.004	.003	.005	.005	.003	.003	.003	.004	.004	.005	.005
Printing and stationery.....	.001	.001	.001	.001	.002	.002	.002	.001	.002	.002	.002	.002
Legal expenses.....												
Expenses not otherwise provided for.....												
Total.....	.130	.158	.117	.151	.179	.160	.135	.119	.151	.114	.183	.161

¹ Less than 1 mill.² Credit.

Costs per net ton, April-December, 1915—Continued.

	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
<i>Administrative expenses.</i>									
Salaries of officers.....	\$0.102	\$0.126	\$0.097	\$0.065	\$0.074	\$0.098	\$0.074	\$0.085	\$0.073
Salaries general office clerks.....	.070	.086	.084	.045	.065	.057	.047	.054	.058
General office expense.....	.002	.002	.001	(1)	(1)	.001	.001	.002	.001
Rent.....	.015	.018	.014	.009	.011	.013	.010	.011	.010
Insurance.....	.002	.002	.002	.001	.003	.002	.001	.002	.001
Telephone and telegraph.....	.006	.008	.006	.004	.001	.008	.003	.004	.004
Printing and stationery.....	.006	.006	.001	.004	.002	.001	.001	.003	.003
Legal.....	.010	.007	.008	.001	.016	.011	.002	.006	.003
Interest on accounts payable.....	.028	.029	.041	.024	.003	.117	2.004	.005	.024
Subscriptions and donations.....				.001					
General advertising.....	.018	.017	.005	.003	.005	.002	.004	.004	.005
Expenses not otherwise provided for.....	.002	.007	.008	.003	.002	.021	.006	.150	.024
Credit reports.....	.009	.001	.001	.005		(1)	(1)	(1)	(1)
Light.....	(1)		(1)	(1)	(1)	(1)	(1)	(1)	.001
Postage.....	.006	.004	.004	.003	.003	.003	.003	.005	.004
Veterinary.....	(1)	(1)	(1)	(1)	.002	(1)	.001	.002	(1)
Total.....	.276	.313	.272	.168	.187	.334	.149	.333	.211
<i>Recapitulation.</i>									
Operating expenses.....	.658	.733	.734	.579	.744	.696	.609	.635	.691
Maintenance.....	.077	.093	.054	.066	.046	.061	.065	.045	.083
Selling expense.....	.034	.028	.012	.008	.017	.045	.021	.018	.018
General expense.....	.216	.258	.209	.135	.158	.196	.142	.169	.153
Administrative expenses.....	.276	.313	.272	.168	.187	.334	.149	.333	.211
Total.....	1.261	1.425	1.281	.956	1.152	1.332	.986	1.200	1.156

¹ Less than 1 mill.² Credit.

At the end of the calendar year 1916, the last period shown in the above tables, the yards of this company were almost entirely bared of anthracite because of the difficulty of securing delivery described in the present report. The amount of degradation, or lowering of size because of loss in size due to breakage through repeated handling, is therefore the more easily determined. The amount of loss through degradation is shown for the period from April 1, 1914, to December 31, 1916, for four grades of anthracite, including egg, stove, nut, and broken sizes. The loss of the four yards is combined into an average for the entire company. For the period of 33 months included the loss through degradation, at the inventory value of the included sizes, was \$29,230.95. Prorated over the period this was equivalent to an average monthly loss of nearly \$900, or more than \$10,600 per year. This factor is usually not given due consideration in calculating the net profit received in the retail distribution of anthracite coal.

The average normal purchases of anthracite coal of this company were approximately 75,000 gross tons a year, of which nearly 97 per cent was regularly secured from a railroad coal company. During the period from April 1, 1914, to December 31, 1916, the total purchases of anthracite of broken, egg, stove, and nut sizes were 168,886 net tons, the receipts during 1916 being much curtailed in large part on account of inadequate transportation facilities. It is probable that of this not less than 160,000 tons were secured from the railroad coal company. During the same period of 33 months the total loss by degradation on all the anthracite coal received from that company was 5,410 net tons, or approximately 3.9 per cent of the

Costs per net ton, January–December, 1916—Continued.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
<i>Administrative expenses.</i>												
Salaries of officers.....	\$0.056	\$0.066	\$0.048	\$0.071	\$0.081	\$0.063	\$0.054	\$0.049	\$0.064	\$0.059	\$0.079	\$0.071
Salaries general office clerks.....	.041	.060	.035	.047	.068	.046	.047	.040	.044	.049	.047	.042
General office expense.....	.001	.002	.002	.003	.003	.001	.001	.001	.001	.001	.002	.001
Rent.....	.008	.010	.007	.010	.011	.009	.008	.007	.009	.008	.011	.010
Insurance.....	.001	.001	.001	.001	.002	.001	.001	.001	.001	.001	.001	.001
Telephone and telegraph.....	.003	.005	.004	.005	.005	.004	.003	.002	.004	.005	.006	.004
Printing and stationery.....	.001	.003	.001	.002	.001	.001	.001	.001	.002	.002	.003	.003
Legal.....	.002	.002	.007	.008	.012	.001	.024	.001	.003	.002	.012	.002
Interest on accounts payable.....	.004	.043	.024	.012	.011	.021	.015	.017	.029	.036	.200	.014
Subscriptions and donations.....											.001	.001
General advertising.....	.004	.006	.003	.003	.028	.007	.003	.001	.003	.002	.003	.002
Expenses not otherwise provided for.....	.008	.003	.016	.017	.007	.029	.033	.002	.031	.002	.034	.024
Credit reports.....	(1)	.001	.001	.005	.002	.002	.005	(1)	(1)	(1)	.001	(1)
Light.....			(1)	(1)	(1)		(1)	(1)	(1)	(1)	(1)	(1)
Postage.....	.004	.005	.004	.003	.004	.003	.002	.002	.002	.003	.007	.004
Veterinary.....	.001	(1)	.002	.002	.002		.001	(1)	.005	.001	.004	.003
Total.....	.134	.207	.155	.189	.237	.188	.198	.124	.198	.171	.411	.182
<i>Recapitulation.</i>												
Operating expenses.....	.669	.824	.704	.677	.689	.634	.660	.622	.575	.692	.673	.766
Maintenance.....	.046	.076	.073	.053	.070	.052	.053	.057	.094	.098	.093	.065
Selling expense.....	.015	.014	.009	.029	.011	.019	.020	.020	.029	.033	.029	.016
General expense.....	.130	.158	.117	.151	.179	.160	.135	.119	.151	.114	.183	.161
Administrative expenses.....	.134	.207	.155	.189	.237	.188	.198	.124	.198	.171	.411	.182
Total.....	.994	1.279	1.058	1.099	1.186	1.053	1.066	.942	1.047	1.108	1.389	1.190

¹ Less than 1 mill.

amount received. The receipts by sizes and loss through degradation were as follows:

Size.	Broken.	Egg.	Stove.	Nut.
Receipts (net tons).....	28,678	52,685	41,150	46,373
Degradation (net tons).....	622	2,407	1,011	1,370
Per cent loss.....	2.2	4.6	2.5	3.0

"Premium" coal.—"Premium" coal as used in this section may be defined as coal for which the dealer paid abnormally high amounts either for the coal itself or for its transportation to his yard.

The total percentage of premium coal, that is, coal purchased at a yard cost price greater than circular price plus normal transportation charges, handled by 52 representative retailers in New England (not including Boston) amounted to 34 per cent. For six selected cities in other sections of the country the percentage of premium coal handled by the representative dealers covered was highest for Chicago (24 per cent), Niagara Falls (16 per cent), and New York (12 per cent). For Detroit, Buffalo, and Milwaukee each it was less than 1 per cent.

For the representative dealers investigated by the Commission the volume of anthracite coal delivered to the dealer's yard at premium either on the coal or on its transportation during the last four months of the year 1916 reached 1,315,293 tons for New York City, 131,094 tons for New England (excluding Boston), 51,023 tons for

Chicago, 3,030 tons for Niagara Falls, 842 tons for Detroit, 329 tons for Milwaukee, and 92 tons for Buffalo.

Table 31 shows tonnage of coal purchased by 52 retailers in 22 markets in New England (not including Boston). For rail shipments the New England mine circular plus the usual freight rate is considered as a base. For combined rail and water shipments the New York tide circular plus normal "company" barge rate, discharging and rail freight to destination, when not on seaboard is taken as a base. The increase in dollars and cents over these normal costs is shown in the columns headed "Premium."

TABLE 31.—Gross tons of anthracite purchased by representative retailers in 22 New England markets outside Boston, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916.

{Column headed "Premium" shows in dollars and cents the weighted average increase in cost per gross ton over circular (New England mine, or New York tide, as indicated), plus transportation and discharge as shown in columns at left of this table.]

ALL-RAIL MARKETS.

Markets.	Number of companies considered.	New England l. o. b. mine circular plus freight of—	Premium coal purchased, by months and by sizes.																Total rail coal purchased (tons).	Per cent rail premium coal to total.		
			September.		October.		November.		December.		Eggs.		Stove.		Nut.		Pea.				Total.	
			Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.			Tons.	Premium.
Avon, Mass.....	1	\$3.15	115	\$2.36	221	\$3.32	291	\$1.56	83	\$3.50	157	\$3.00	96	\$2.54	336	\$2.99	172	\$2.42	336	\$2.99	100	
Holyoke, Mass.....	3	2.80	471	2.05	2,601	3.69	38	.85	655	3.61	1,306	3.02	1,230	3.50	3,363	3.28	318	1.02	12,558	26		
Lawrence, Mass.....	5	3.25	1,979	1.75	1,209	2.18	38	.85	575	1.77	1,170	1.60	1,451	2.12	3,514	1.79	318	1.02	13,488	27		
Lowell, Mass.....	2	3.20	78	.68	880	3.57	.....	.....	183	3.97	273	3.91	717	1.86	323	2.70	323	2.70	1,946	77
Needham, Mass.....	1	2.85	300	1.58	228	2.77	390	1.73	243	2.30	240	1.92	306	1.79	129	1.65	129	1.65	918	58		
Newton Upper Falls, Mass.	1	2.85	89	.30	78	.60	40	3.90	39	60	89	.30	79	2.27	207	1.11	207	1.11	1,335	58		
Northampton, Mass.....	1	2.80	360	.57	299	5.32	765	1.83	711	1.89	401	2.73	395	1.94	1,507	2.13	1,507	2.13	3,342	69		
Springfield, Mass.....	3	2.75	1,149	.43	2,657	2.42	1,295	1.74	795	1.48	2,632	1.39	1,958	1.80	807	1.19	6,192	1.51	20,349	30		
Worcester, Mass.....	2	2.85	2,447	.54	5,462	2.62	856	1.44	1,282	1.04	3,510	1.85	2,856	2.45	1,087	1.84	8,765	1.93	44,526	20		
Total rail markets....	19	.....	7,437	1.08	13,597	2.89	3,635	1.66	4,566	1.94	9,808	1.95	9,088	2.31	2,836	1.69	26,298	2.05	98,461	27	

¹ On pea coal.

TABLE 31.—Gross tons of anthracite purchased by representative retailers in 22 New England markets outside Boston, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916—Continued.

BARGE MARKETS.

Markets.	Number of companies considered.	Nature of transportation.	Barge rate.	Discharge.	Rail freight.	New York tide circular plus charges of—	New England f. o. b. mine circular plus freight of—	Premium coal purchased, by months.									
								September.		October.		November.		December.		Total.	
								Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.
Fall River, Mass.....	3	Barge.	\$1 \$0.45 2 .55	\$0.20	.....	1 \$0.65 2 .75	3 1,995	\$0.78	4 6,670	\$0.90	5 5,118	\$1.61	3 2,256	\$0.88	9 16,039	\$1.11
New Haven, Conn.....	4	do.	.35	.25	.....	.60	.....	.....	.....	.....	4 367	2.64	5 688	1.93	10 055	2.23
New London, Conn.....	1	do.	1.35	.20	.....	.55	.....	.....	.....	.....	4 349	3.15	1 395	3.12	5,744	3.14
Portland, Me.....	1	do.	1.75	.20	.....	1.95	.....	3 980	1.58	3 309	2.30	.....	7 75	.80	1 364	1.70
Portsmouth, N. H.....	1	do.	2.85	.20	2 1.05	67	1.23	456	1.91	29	2.76	1 030	2.28	1 582	2.14
Providence, R. I.....	3	do.	1.65 2.75 .45	.20	1.85 2.05 .65	9 3,695	.82	5,981	2.28	10 17,012	3.73	7 386	2.01	11 34,074	2.79
Total barge markets.....	13	do.	.....	.....	.....	.....	12 6,737	.92	13 13,416	1.58	14 30,875	3.14	15 17,830	1.94	16 68,858	2.31

¹ September and October.² November and December.³ Bought at New York Tide Circular; excessive barge rates.⁴ 322 tons bought at New York Tide Circular; excessive barge rate.⁵ 960 tons bought at New York Tide Circular; excessive barge rates.⁶ 533 tons bought at New York Tide Circular; excessive barge rates.⁷ All rail coal.⁸ 289 tons bought at New York Tide Circular; excessive barge rates.⁹ 1,016 tons bought at New York Tide Circular; excessive barge rates.¹⁰ 2,500 tons bought at New York Tide Circular; excessive barge rates.¹¹ 3,570 tons bought at New York Tide Circular; excessive barge rates.¹² 3,991 tons bought at New York Tide Circular; excessive barge rates.¹³ 4,631 tons bought at New York Tide Circular; excessive barge rates.¹⁴ 4,623 tons bought at New York Tide Circular; excessive barge rates.¹⁵ 2,256 tons bought at New York Tide Circular; excessive barge rates.¹⁶ 17,388 tons bought at New York Tide Circular; excessive barge rates.

TABLE 31.—Gross tons of anthracite purchased by representative retailers in 22 New England markets outside Boston, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916—Continued.

Markets.	Premium coal purchased, by sizes.										Total coal purchased.	Total barge coal purchased.	Total rail coal purchased.	Per cent barge premium coal to total.	Per cent rail premium coal to total.		
	Broken.		Egg.		Stove.		Nut.		Pea.							Total.	
	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.						Tons.	Premium.
Fall River, Mass.	1 3,951	\$0.83	2 8,596	\$1.14	3 3,492	\$1.33	5 3,378	\$2.00			4 16,039	\$1.11	22,242	72			
New Haven, Conn.	841	2.96	1,302	2.37	2,534	2.42	1,676	3.57			10,055	2.23	31,729	32			
New London, Conn.			1,487	3.76	1,851	3.07	1,676	3.57	730	\$1.12	5,744	3.14	10,952	52			
Portland, Me.			5 362	1.49			6 1,002	1.77			7 1,364	1.70	36,384	1,981			
Portsmouth, N. H.			413	2.08	72	1.28	1,097	2.22			11 582	2.14	3,527	246			
Providence, R. I.			8 7,300	3.08	9 11,401	2.67	10 12,464	2.77	11 2,909	2.56	12 34,074	2.79	81,039	35			
Total barge markets	13 4,792	1.20	14 19,460	2.18	15 19,350	2.43	16 21,617	2.57	17 3,639	2.27	18 68,858	2.31	185,873	42			
1 3,740 tons bought at New York Tide Circular; excessive barge rates.																	
2 6,389 tons bought at New York Tide Circular; excessive barge rates.																	
3 2,404 tons bought at New York Tide Circular; excessive barge rates.																	
4 12,533 tons bought at New York Tide Circular; excessive barge rates.																	
5 Bought at New York Tide Circular; excessive barge rate.																	
6 927 tons bought at New York Tide Circular; excessive barge rates.																	
7 1,289 tons bought at New York Tide Circular; excessive barge rates.																	
8 798 tons bought at New York Tide Circular; excessive barge rates.																	
9 1,168 tons bought at New York Tide Circular; excessive barge rates.																	
10 1,109 tons bought at New York Tide Circular; excessive barge rates.																	
11 501 tons bought at New York Tide Circular; excessive barge rates.																	
12 3,576 tons bought at New York Tide Circular; excessive barge rates.																	
13 3,740 tons bought at New York Tide Circular; excessive barge rates.																	
14 7,549 tons bought at New York Tide Circular; excessive barge rates.																	
15 3,572 tons bought at New York Tide Circular; excessive barge rates.																	
16 2,036 tons bought at New York Tide Circular; excessive barge rates.																	
17 501 tons bought at New York Tide Circular; excessive barge rates.																	
18 17,398 tons bought at New York Tide Circular; excessive barge rates.																	

TABLE 31.—Gross tons of anthracite purchased by representative retailers in 22 New England markets outside Boston, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916—Continued.

RAIL AND BARGE MARKETS.

Markets.	Number of companies considered.	Nature of transportation.	Barge rate.	Discharge.	Rail freight.	New York tide circular plus charges of—	New England l. o. b. mine circular plus freight of—	Premium coal purchased, by months.									
								September.		October.		November.		December.		Total.	
								Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.
Attleboro, Mass.	2	Barge	\$0.45	\$0.20	\$0.55	\$1.20	.....	.....	126	\$1.96	33	\$1.70	.....	.....	159	\$1.91	
		Rail	.....	.....	.....	.....	\$3.00	.....	42	3.30	238	2.99	38	\$1.50	318	2.85	
		Total	.....	.....	.....	.....	.....	.....	168	2.29	271	2.83	38	1.50	477	2.54	
Brookton, Mass.	4	Barge	.45	.20	.75	1.40	.....	73	0.85	.....	.....	463	2.00	.....	.....	536	1.84
		Rail	.....	.....	.....	.....	3.15	449	.31	374	1.08	1,818	2.89	378	1.20	3,019	2.07
		Total	.....	.....	.....	.....	.....	522	.39	374	1.08	2,281	2.71	378	1.20	3,555	2.04
Dover, N. H.	1	Barge	.65	.20	.60	1.45	.....	113	.60	114	1.55	66	2.82	.....	.....	283	1.47
		Rail	.....	.....	.....	.....	3.15	.....	590	.85	603	4.01	867	3.10	2,060	2.72	
		Total	.....	.....	.....	.....	.....	113	.60	704	.96	669	3.89	867	3.10	2,353	2.56
Hartford, Conn.	4	Barge	.35	.20	.....	.55	.....	.....	57	.71	3,047	1.01	2,300	1.06	5,464	1.03	
		Rail	.....	.....	.....	.....	2.45 1 2.05	.....	2,654	1.83	7,752	2.26	4,089	1.65	14,495	2.01	
		Total	.....	.....	.....	.....	.....	.....	2,711	1.81	10,799	1.91	6,449	1.43	19,959	1.74	
Haverhill, Mass.	3	Barge	2.65 3.35	2.22 3.25	.....	1.47	.....	.....	1,008	3.18	.....	.....	.....	.....	1,008	3.18	
		Rail	.....	.....	.....	.....	3.50	1,693	.26	340	.56	500	2.36	187	1.78	2,720	.79
		Total	.....	.....	.....	.....	.....	1,693	.26	1,348	2.52	500	2.36	187	1.78	3,728	1.44

Manchester, N. H.....	4	Barge.....	.65	.20	.75	1.60	3.55	881	.60	1,610	1.99	108	3.45	108	3.45	3.45
		Rail.....										1,170	2.98	3,661	1.97	1.97
		Total.....														
Taunton, Mass.....	2	Barge.....	.45	.20	.55	1.20	2.75	881	.60	1,610	1.99	1,278	3.02	3,769	2.01	2.01
		Rail.....														
		Total.....														
Total rail and barge markets.....	20	Barge.....						186	.70	1,430	2.67	3,717	1.24	7,693	1.44	1.44
		Rail.....						3,023	.38	5,897	1.70	13,116	2.57	28,245	2.00	2.00
		Total.....						3,209	.39	7,327	1.89	16,833	2.28	35,938	1.88	1.88

1 On pea coal.

2 Ocean barge and discharge.

3 River barge and discharge.

TABLE 31.—Gross tons of anthracite purchased by representative retailers in 22 New England markets outside Boston, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916—Continued.

RAIL AND BARGE MARKETS.

Markets.	Nature of transportation.	Premium coal purchased, by sizes.												Total barge premium coal.	Per cent barge premium to barge purchased.	Total rail premium coal.	Per cent rail premium to rail purchased.	Total coal purchased.	Total barge coal purchased.	Per cent barge to total.	Total rail coal purchased.	Per cent rail to total.	
		Broken.		Egg.		Stove.		Nut.		Pea.		Total.											
		Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.										
Attleboro, Mass.	Barge Rail.			90	\$2.07	115	\$3.52	69	\$1.70			83	\$1.72	159	\$1.91	318	2.85		159	8	1,768	92	
Total				90	2.07	115	3.52	189	2.52			83	1.72	477	2.54			1,927					
Brockton, Mass.	Barge Rail.	159	\$0.80	150	2.55	152	1.68	75	3.00			75	1.61	536	1.84			536	7	7,568	93		
Total		178	.37	751	1.66	1,278	1.99	737	3.07			75	1.61	3,019	2.07			3,019	40				
Dover, N. H.	Barge Rail.	337	.57	901	1.81	1,430	1.96	812	3.06			75	1.61	3,555	2.04			8,104					
Total		38	.85	30	.35	774	2.73	157	1.63			68	1.93	293	1.47			2,060	59	293	8	3,502	92
Hartford, Conn.	Barge Rail.			1,311	1.01	1,657	.87	2,466	1.15					5,464	1.03			14,495	51	25,076	47	28,232	53
Total				3,304	1.55	7,351	1.85	6,158	1.85			3,146	1.44	19,959	1.74			53,308					
Haverhill, Mass.	Barge Rail.			656	3.20	1,052	.73	352	3.15					1,008	3.18			2,720	95	5,832	67	2,874	3
Total				1,207	.88	1,052	.73	461	.66					2,720	.79			8,706					
Manchester, N. H.	Barge Rail.	38	3.45	1,280	1.98	813	1.81	108	3.45			128	1.04	108	3.45			3,661	47	1,062	12	7,738	88
Total		38	3.45	1,280	1.98	813	1.81	1,510	2.20			128	1.04	3,769	2.01			8,800					

Taunton, Mass	Barge	83	1.20	42	1.20	514	2.84	149	2.60	125	1.20	125	1	1,972	45	13,752	9,328	68	4,424	32
	Rail	681	2.69	628	2.66	514	2.84	149	2.60	1,972	2.71	1,972								
Total		764	2.53	670	2.57	514	2.84	149	2.60	2,097	2.62	2,097								
Total rail and barge markets	Barge	197	.81	1,851	.94	3,227	1.52	68	1.93	7,693	1.44	7,693	18	28,245	50	42,286	43			
	Rail	216	.91	10,354	2.04	7,603	2.36	3,772	1.54	28,245	2.00	28,245						56,106	57	
Total		413	.86	8,650	1.80	12,205	1.87	10,830	2.11	35,938	1.88	35,938			98,392					

TABLE 31.—Gross tons of anthracite purchased by representative retailers in 22 New England markets outside Boston, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916—Continued.

[illegible]

Markets.	Total premium coal purchased (tons).	Premium.	Total barge premium coal (tons).	Per cent barge premium to barge purchased.	Total rail premium coal (tons).	Per cent rail premium to rail purchased.	Total coal purchased (tons).	Total barge coal purchased.	Per cent barge to total.	Per cent barge to grand total.	Total rail coal purchased (tons).	Per cent rail to total.	Per cent rail to grand total.	Per cent total premium to total purchased.
Rail markets.....	26,298	2.05	68,537	36.9	26,298	26.7	98,461	185,873	99.0	48.3	98,461	.....	25.6	26.7
Barge markets.....	168,858	2.31	7,693	36.9	321	.1	188,100	42,286	43.0	11.0	2,227	1	.5	36.6
Rail and barge markets.....	35,938	1.88	7,693	18.2	28,245	50.3	98,392	228,159	59.3	59.3	56,106	57	14.6	36.8
Grand total.....	131,094	2.14	76,230	33.4	54,864	35.0	384,953	228,159	59.3	59.3	156,794	40.7	40.7	34.1

1 17,398 tons bought at New York Tide Circular and included in this table because of excessive barge rates.
 2 Decrease.

For the purposes of this tabulation, markets are grouped according to the class of transportation normally used in shipping the coal.

Excessive barge rates were responsible for increased costs to a great extent, about 75 per cent of "premium" coal purchased in Fall River, Mass., having been bought at circular, while the same is true of practically all that purchased by the companies in Portland, Me. The data gathered in Providence showed definitely the New York tide prices of coal purchased by only one local dealer.

"Premium" coal increased greatly, both in tonnage and amount of "premium" paid per ton from September to and including November, when both quantity and price reached the peak, nearly half of the total "premium" coal being purchased in that month. Both tonnage and amount of "premium" decreased in December. Nut, stove, and egg, in the order given, were the sizes most involved, both as to tonnage and amount of "premium."

"Premium" coal comprised 34.1 per cent of the total coal purchased by these companies, 19.8 per cent arriving by barge and 14.3 per cent by rail. Of the total amount purchased 59.3 per cent was barge and 40.7 per cent rail coal.

Of the 54,864 tons of all-rail premium coal going to the rail and to the rail and barge markets practically the entire amount of premium was due to premium on the coal itself.

In the case of two of the barge-market dealers in Providence handling 19,131 tons of the premium coal, the data were not secured in such form as to show separately the price of coal and the barge rate. But 39,701 tons of premium barge coal, covered in the barge and the rail and barge markets are known to have been at normal barge rates, the premium being in the price of the coal; and 17,398 tons are known to have been purchased at New York Tide circular, the premium on this quantity being due entirely to excessive barge rates.

Of the total premium coal covered, therefore, 94,565 tons or 72.1 per cent, are known to be due to premium on the coal; 17,398 tons or 13.3 per cent, due to excessive barge rates; and 19,131 tons or 14.6 per cent unclassified.

Representative dealers were covered in these markets, and it is probable that the same situation obtained throughout New England.

Table 32 shows that in Chicago, the next largest "premium" coal market, comparatively little "premium" coal was handled in September, but during the following three months ever-increasing quantities of "premium" coal were bought, the climax being reached in December. Other cities are also covered in the table. The figures do not cover all the anthracite handled in these markets, but cover all that handled by the dealers investigated by the Commission, and the showing is probably representative of the conditions for each city.

TABLE 32.—Gross tons of anthracite purchased by representative retailers in New York, Buffalo, Niagara Falls, Detroit, Milwaukee, and Chicago, at prices above normal, and the difference between the circular price plus freight, and the weighted average prices paid, September — December, 1916.

[Money amounts represent premium.]

City.	September.									
	Egg.				Stove.		Nut.			
	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.	Tons.	Premium.
New York.....	17	\$0.84			287	\$0.61			300	\$0.57
Detroit.....	30	.50							54	.75
Chicago.....					357	.32			3,402	.37

City.	October.											
	Broken.		Egg.		Stove.		Nut.		Pea.		Buckwheat.	
	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium
New York.....	1,461	\$1.39	4,798	\$1.75	3,972	\$1.72	4,109	\$1.56			604	\$0.29
Niagara Falls.....			46	.90	185	2.07	351	2.26	91	\$2.36		
Detroit.....			188	.15	127	.26	77	.15				
Chicago.....			2,530	.42	825	1.04	5,149	.68	3,132	.40		

City.	November.											
	Egg.		Stove.		Nut.		Pea.		Buckwheat.		Rice.	
	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium
New York.....	16,781	\$3.60	16,708	\$3.46	16,106	\$2.80	4,974	\$1.09	6,979	\$0.81	588	\$1.00
Buffalo.....	92	1.70										
Niagara Falls.....	126	1.40	388	3.50	264	3.52	49	.80				
Detroit.....	203	.66			116	.15						
Chicago.....	2,648	1.43	1,373	1.60	5,464	1.44	2,114	.59				

City.	December.													
	Broken.		Egg.		Stove.		Nut.		Pea.		Buckwheat.		Rice.	
	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium	Tons.	Pre-mium
New York.....	1,442	\$2.77	20,861	\$2.19	18,562	\$1.97	9,309	\$1.79	1,841	\$0.75	5,180	\$1.57	314	\$1.25
Niagara Falls.....			370	.63	698	1.68	418	.98	44	1.75				
Detroit.....					47	.40								
Milwaukee.....									329	1.50				
Chicago.....			2,668	1.67	3,111	1.87	16,129	1.92	2,125	1.48				

City.	Total coal purchased.		Total abnormal priced coal.		Per cent.
	Tons.	Premium	Tons.	Premium	
New York.....	1,062,938		135,293		12.73
Buffalo.....	25,547		92		.36
Niagara Falls.....	18,395		3,030		16.47
Detroit.....	100,118		842		.84
Milwaukee.....	107,725		329		.31
Chicago.....	205,833		51,023		24.78

The sizes most affected were nut, stove, egg, and pea, in the order named. It is significant that no pea was bought at premium in September, but in October this steam size was bought at premium to the extent of 3,132 tons. In November and December premium pea reached 2,114 and 2,125 tons, respectively.

In the Niagara Falls market premium coal made its appearance in October and kept increasing until it reached its maximum in December, with stove and nut sizes in the lead and egg following.

In the New York market small quantities of premium stove and nut were bought in September. They increased in October and reached the high-water mark for nut, pea, and buckwheat in November and for egg and stove in December.

In Detroit, October was the premium coal month, with egg, stove, and nut sold in the order named. While egg and nut continued to command premium in November, no premium stove coal was bought again until in December. No premium pea coal was bought in Detroit by the dealers covered.

The only premium coal handled in Milwaukee by the dealers covered was 329 tons of pea in December.

It is significant that steam sizes (pea and buckwheat) commanded premium in the large manufacturing centers, New York, Chicago, and Milwaukee, a condition which may be explained by the inadequate supply of bituminous coal.

SECTION 10. CONDITIONS IN THE LOCAL JOBBING AND RETAILING OF ANTHRACITE IN VARIOUS IMPORTANT MARKETS.

BOSTON.

Transportation.—Practically all the retail yards in Boston are located on navigable water and receive their coal in barges. In normal times about 90 per cent of the supply comes in this way, while the remainder comes by rail to small yards located in the outlying districts, such as Brookline, Forest Hills, etc.

All the railroad coal companies except the Delaware & Hudson Co. and the Delaware, Lackawanna & Western Railroad, have their own coal-barge service from New York and Philadelphia tidewater ports to Boston Bay. Delaware & Hudson Co.'s coal sold to the Scranton Coal Co. (New York, Ontario & Western Railway), is resold in Boston by Dickson & Eddy, selling agents of the Scranton, being shipped from New York in New York, Ontario & Western barges. The Delaware, Lackawanna & Western sells to the New England trade, but its New England barge service was abandoned in 1913, and the coal is now sold f. o. b. New York tide and shipped in independent barges.

Since October, 1916, Williams & Peters, selling agents for the Pennsylvania Coal Co. and Hillside Coal & Iron Co. (both controlled by the Erie), have shipped little coal to New England and have chartered their barges to jobbers and others for the New England trade.

The coal formerly shipped to New England and New York City by Williams & Peters was largely diverted to the West in order to give the Erie Railroad the long haul. Beginning with June, 1917, these interests have resumed their normal shipments of anthracite to eastern territory.

During the period of coal shortage in 1916, a considerably larger proportion of the supply came by all-rail routes than is customary. There were two reasons for this. In the first place, it was much easier in the stringency of production to get a few cars of coal than it was to get a cargo of four or five hundred tons. Moreover, the increase in the charter rates on railroad coal company barges, and especially on independent barges, together with the danger of demurrage charges accruing on either the barge or on the cars at tide-water, increased the cost of water shipments to such an extent that the all-rail rate was in some instances the cheaper of the two, even though it was necessary to haul the coal to the yard from the railroad sidings.

At the beginning of the season the charter rates on the barges belonging to the railroad coal companies were 50 cents per ton from the New York ports to Boston, but on November 1 some of these companies increased their rates to 75 cents. On this date the Lehigh Coal & Navigation Co., increased the prices of egg, stove, and nut coal 45 cents per ton and pea coal 60 cents in its Boston circular. In a footnote it was explained that the 45-cent advance in prices on November 1 was occasioned by increased towage and other expenses for handling barges. There is reason to believe that the 50-cent barge rate may have been below cost.

Some independent-owned barges charged demurrage at the rate of 6 cents per day per ton for time in excess of the free days consumed in loading and unloading, the number of free days allowed depending, of course, on the size of the barge. One jobber stated that six free days were allowed to load and discharge, with a demurrage charge of \$100 per day for excess time consumed, but did not state the size of the barge to which this rate applied. Williams & Peters published a schedule showing the days allowed for discharging different-sized barges, together with the demurrage charge for time consumed in excess of this allowance. The schedule is as follows:

Barges up to 800 tons, 3 working days; extra days, \$10 per day.

Barges of 801 to 900 tons, 4 working days; extra days, \$12 per day.

Barges of 901 to 1,050 tons, 4 working days; extra days, \$15 per day.

Barges of 1,051 to 1,350 tons, 5 working days; extra days, \$17.50 per day.

Barges of 1,351 to 1,600 tons, 5 working days; extra days, \$20 per day.

Unloading premiums were allowed at the same rate in case the barge was released in less than this number of days. Several companies reported having earned and received a small amount for quick unloading. Whether or not independent barge owners allowed unloading premiums was not learned.

One retail company paid \$2.10 per ton (35 days, at 6 cents per ton per day) on one cargo of coal, the barge being placed November 14 and not loaded until December 21. Another paid \$1.86 a ton on a cargo, and a third had to pay 42 cents per ton on a cargo.

These were instances reported to the Commission's agents, and there were undoubtedly others. While these are probably extreme cases, they indicate the danger the dealer ran on cargo orders under the conditions prevailing at this time.

Sources of supply and methods of distribution.—Anthracite produced by each of the railroad coal companies comes into Boston by barges from New York and Philadelphia tide, as explained above. In normal times the great bulk of the coal used comes from these companies, but in times of stress a great deal of independent coal is also handled.

Some of the larger retailers buy their coal direct from the railroad coal companies, while others buy company coal through jobbers, paying an extra 10 cents per ton as the jobber's commission. Several of these jobbers are located in Boston, each usually handling the coal of some particular railroad coal company. There are also in Boston a number of jobbers of independent coal who sell some coal in Boston, but the bulk of those sales are in the New England territory outside of Boston.

There are no wholesale trestles in Boston where the retailer can buy his coal a load at a time. Each retailer has his own yard, with greater or less storage capacity. There is some coal sold by peddlers, who buy from retailers at regular yard prices and sell in small quantities from house to house at higher prices.

Normal consumption.—According to the annual reports of the Boston Chamber of Commerce there is somewhat more than one and a half million gross tons of anthracite coal consumed each year in Boston. The net receipts reported, beginning with 1912, are as follows:

Year ending Dec. 31 :	Gross tons. ¹	Year ending Dec. 31 :	Gross tons. ¹
1912-----	1, 576, 725	1914-----	1, 732, 054
1913-----	1, 756, 206	1915-----	1, 575, 308

Local shortage and its effect on wholesale prices.—With few exceptions, the retailers of Boston sold as much coal in 1916 as they did in 1915, and in some cases more. Where data were secured for the nine months from April 1 to December 31 of each year, the sales for these months of 1916 were about the same as for the corresponding period of 1915. Where comparisons were secured only between the year's business from April to March and the nine months of 1916, the sales for April to December, 1916, were about three-fourths as large as the business for the preceding year. Hence it is safe to say that there was no appreciable decrease in the quantity of coal sold during this period. Though no less coal was received in the aggregate for the period, the supply was not available at the times needed.

During December, 1915, and the early part of 1916 there was a shortage of coal in New England due to difficulties in transportation. Remembering this shortage, most dealers in 1916 urged their customers to get in their coal during the summer. In response to this urging orders poured in on some dealers much faster than they could be filled. At the same time the coal did not come in as fast as usual, and the dealers could not fill their storage bins for the fall and winter trade. The majority of the dealers found in September that they had a large quantity of coal sold at summer price and undelivered, while they had very little coal on hand. In most cases their stocks on hand were less than half their storage capacity.

¹ The Coal Trade, 1916, pp. 80, 81.

Soon after this time Williams & Peters withdrew from the New England market, while the other railroad coal companies further reduced their deliveries to regular customers and refused to take on new business. This left without an adequate source of supply those retailers who had been dealing principally with Williams & Peters and the other railroad coal companies, and sent them to the independent jobbers. At the same time the newspapers announced that there was about to be another coal famine, and the consumers began clamoring for coal deliveries, some of them going from dealer to dealer until their bins would be filled and in some cases would not hold all the coal delivered.

Such dealers as had scant supplies of company coal to meet the demand began bidding for the independent coal, which caused the price to the retailers to advance rapidly. These advances ranged from only a few cents to as high as \$6.31 a net ton above the Lehigh Valley Coal Sales Co.'s Boston circular prices. This was the extreme high price found and, so far as ascertained, only one car of egg cost this price. With the exception of this one car the highest prices paid by any of the 14 dealers visited were \$8.12 per net ton for broken, \$10.85 for egg, \$10.71 for stove and nut, and \$7.50 for pea. The highest average prices paid by any of these dealers for the coal sold during the four months, September to December, 1916, were: \$6.44 per net ton for broken, \$6.92 for egg, \$7.01 for stove, \$7.29 for nut, and \$6.47 for pea.

The average prices paid by each of these 14 dealers is shown in a later table (see p. 182). Most of these dealers received considerable coal at circular prices and very little was bought at the highest prices noted above.

Boston jobbers.—The following table shows gross margins obtained by three of the Boston jobbers: Jobber No. 1 handled mostly railroad coal on which he enjoyed a margin of \$0.189 during September. This is a margin practically double a 10 cent normal margin ordinarily allowed to jobbers on railroad coal in this territory. Higher margins in October, November, and December were obtained on the premium coal which he handled.

Jobber No. 2 realized excessive margins during the fall crisis. He made his largest margins on prepared sizes during October and November, when he obtained a profit of \$1.354 and \$1.145, respectively, per gross ton. Margins obtained on steam sizes, which represent approximately 15 per cent of his business, did not show the decided increase after September shown by the prepared sizes. Jobber No. 2 received margins ranging as high as \$5.05 on some coal and lost as much as \$1.90 on some. He had an agreement with one of the independent operators which provided that he was to receive coal at "circular" and sell for the highest premium obtainable. From these high gross margins the jobber was to deduct a commission of 15 cents per ton, the remainder of the premium to be divided equally between the operator and the jobber. This arrangement covered only about 10 per cent of this jobber's sales. The rebate to the operator was more than 5 cents per ton on the total business in October, 6½ cents in November, and more than 21 cents in December.

Jobber No. 3 realized an excessive margin on his anthracite business after September, reaching in November the high mark of all Boston jobber margins examined (\$1.852 per gross ton).

Gross margin, per gross ton.

Market.	Jobber.	Source of coal.	Size of coal.	Percentage of all business, September-December.	1916			
					September.	October.	November.	December.
Boston...	No. 1.	{Railroad and some jobber coal.	{Prepared..	93	0.189	0.313	0.471	0.346
Do...	No. 1.	{Weighted average, all business.	{Steam.....	7	.178	.236	.716	.855
			All.....	100	.189	.313	.492	.426
Do...	No. 2.	{Railroad (7 per cent) and Independent (93 per cent).	{Prepared..	85	.241	1.354	1.145	.736
Do...	No. 2.	{Adjustment on Independent.	{Steam.....	15	.157	.388	.384	.275
Do...	No. 2.	{Net weighted average, all business.	All.....	100	.231	1.186	.957	.435
Do...	No. 3.	Railroad, weighted average, all business.	All.....	100	.353	1.209	1.852	1.227
Total weighted average of all business.....					.221	.874	.907	.510
Total tonnages sold.....					78,589	78,025	77,285	50,321

From the above it will be seen that the jobbers of independent coal have shared to a considerable extent in the increased margins between the cost of production and the cost to the retailer. One such jobber, whose business is not shown in this table, frankly stated that he was endeavoring to secure a larger margin of profit on his sales of high-priced coal than he usually made. He asserted this was necessary on account of the increased cost of doing business and the increased risk incurred.

Retail list prices.—As already stated the prices of the Metropolitan Coal Co. are commonly followed by the other retailers of Boston. A copy of these prices with each change made during the period from April 1, 1915, to December 31, 1916, is shown in the following statement. These prices were copied from the lists used by the Metropolitan Coal Co.'s salesmen, and were the prices at which orders were to be taken during the time they were in effect.

Retail list prices per net ton of the Metropolitan Coal Co.—household trade.

	Furnace.	Egg.	Stove.	Nut.	Pea.	Screenings.	Lehigh furnace.	Lehigh egg.	Shamokin.	Franklin.
1915.										
Apr. 1.....	\$6.50	\$7.25	\$7.25	\$7.50	\$5.50	\$3.00	\$6.75	\$7.50	\$7.50	\$8.50
July 1.....	6.75	7.50	7.50	7.75	5.75	.....	6.75	7.50	7.75	8.75
Aug. 16.....	7.00	7.75	7.75	8.00	6.00	.....	7.00	7.75	8.00	9.00
Dec. 15.....	7.25	8.00	8.00	8.25	6.25	.....	7.50	8.25	8.25	9.25
1916.										
May 16.....	6.75	7.50	7.75	7.75	5.75	3.25	6.75	7.50	8.00	9.00
June 26.....	7.00	7.75	8.00	8.00	6.00	.....	7.00	7.75	8.25	9.25
Aug. 21.....	7.25	8.00	8.25	8.25	6.25	.....	7.25	8.00	8.50	9.50
Oct. 23.....	7.50	8.75	8.75	8.50	6.50	.....	.....	.....	9.00	10.00
Nov. 1.....	7.50	8.75	8.75	8.75	6.50	.....	.....	.....	9.00	10.00
Nov. 2.....	8.50	9.50	9.50	9.50	7.50	4.00	.....	.....	10.00	11.00
Dec. 27.....	9.50	9.50	9.50	9.50	7.50	.....	.....	.....	10.00	11.00

The list prices of the outlying yards were 50 cents per ton higher than shown in this table. This increase is due to the fact that these yards are located on the railroads instead of the water front and in normal times have to pay higher transportation charges.

Typical selling prices and gross margins.—The typical prices received by the retailers for the coal delivered during the periods of high prices in most cases did not equal these circular prices, as will be seen by reference to the Table 33 below. This is due to orders taken during the period of lower prices but not delivered until after the prices had advanced. As already explained, there was a considerable quantity of coal sold in this way during the summer of 1916.

Many dealers stated that in former years they sold considerable coal to householders on contract, but in 1916 very little was sold in this way. One company in announcing spring prices, in May, said, "Above prices are for immediate delivery and subject to change without notice." Another said, "These prices are for prompt delivery and are not binding until accepted by us." A third said, "These prices are for delivery prior to June 30." A fourth announced, "Summer prices for early delivery." While very little coal was sold on contract, the unfilled orders had about the same effect so far as margins were concerned. One company stated that at no time from September to December were their deliveries at current prices more than one ton in four or five of their total deliveries. So far as could be learned, all the retailers filled these orders at the price current when taken, regardless of the price at date of delivery.

The gross margins of such retailers as had few or no unfilled orders on their books when the crisis came were thus higher than would otherwise have been the case. Margins were also higher for such retailers as purchased all or most of their coal at circular. In the few cases where the retailer had few or no unfilled orders and at the same time received most or all his coal at circular his gross margins were greatly increased. On the other hand, one retail company not shown in the table, which had a large number of orders and received no coal at circular after the 1st of September, asserted that the coal delivered during the period from November 15 to December 31 cost them about \$2.46 per net ton more than the average price received for it. On some of this coal they paid premiums amounting to \$5.75 per gross ton, or \$5.13 per net ton, and somewhat smaller premiums on all the coal they purchased after the 1st of September. Some retailers had so many of these unfilled orders that they discontinued selling for periods ranging from a few days to two weeks or more in order to catch up with their unfilled orders or because they were out of coal. Several dealers stated that there was plenty of coal for the demand, but it could be bought only at premium prices. The question, one man said, was not an actual coal shortage, but a shortage of coal at circular.

Considerable data on retail prices were secured by the Commission from 14 retail companies in Boston. A summary table presents in a brief form the minimum and maximum of the purchase prices, sales prices on different classes of business, and the gross margins on each class of business. (See Table 33 below.) It also shows the average cost of all coal sold during the four months. In Table 34 is shown the purchase price of coal in the yard, the sales price, and margins for each of these 14 dealers. This information is by grades and sizes and by months from September to December, 1916.

The classes of business covered are (1) household trade, being sales to domestic consumers, the prices being those for sidewalk or chute

delivery, in the zone of normal length haul, without charge for carrying into the cellar; (2) industrial contract trade, being sales to industrial plants, institutions, hotels, apartments, etc.; (3) yard trade, where sales are made at the yard, usually to peddlers, and consequently exclude any charge for hauling. For two companies (Nos. 13 and 14) sales prices were secured in the form of a weighted average price on all delivered business, and for these two companies and for company No. 12 they were secured in the form of a weighted average price on business of all classes. Though included in the following summary, these items do not refer to all 14 companies but only to the companies indicated.

In the summary table the gross margins are in each case the gross margin on the class of business just preceding. Thus, in September, on broken coal the first minimum gross margin shown (\$1.54) is that on household trade, being the margin between \$4.79, the cost price, and \$6.85, the minimum typical household sale price on broken in September.

On page 83 above it was explained that most retailers do not keep their books in such form as to show in summary the average price received for given classes of business and sizes of coal. To have secured weighted average prices would therefore have required compilation of each particular sale at great expense of time. It was therefore necessary to secure not weighted average prices, but "typical" prices. These "typical" prices were obtained by inspecting the sales records for the days around the 5th, 15th, and 25th of each month (or at other appropriate dates if new price lists had been issued). The agent took off, for each size of coal and for each class of business, a number of representative sales and thus arrived at the typical price for each of these three periods during the month, and for the month as a whole.

Cost prices as shown in these tables are the result of combining the tonnage on hand on the 1st of the month with that received during the month and getting a weighted average of the cost of all coal available for sale during the month.

It will be noted that the cost of the coal advanced from September to December for almost every company shown in the table. In some cases the advance was only a few cents, and in three instances (broken coal for No. 6 and No. 7 and pea coal for No. 7) the price remained the same during the four months. In each of these cases there was a considerable quantity of coal on hand the 1st of September, and no further purchases were made. Company No. 4 showed the greatest increase in the cost, amounting to as much as \$2.88 on stove. It will also be seen that the price remained the same for the first three months, while the increase all came in the December cost. This was due to the fact that this company did not buy any coal during October and November, evidently expecting the crisis to pass before they ran out of coal. This company's average cost for the season was also very high. Company No. 1 paid the highest average prices for the four months, but this was a rail yard company located in one of the suburbs, which partly accounts for the high cost of its coal. The difference in the cost of coal at a wharf yard and at a rail yard is shown very forcibly in the case of company No. 9, which shows the business at rail and wharf yards separately. The excess in cost of this com-

pany's rail coal over its wharf coal ranges from 28 cents a net ton on chestnut in November to 66 cents on broken in October. An exception occurs on pea for December, the wharf-yard price being 22 cents higher than the rail-yard price.

Sales prices as shown in these tables are not the weighted average of all sales by classes, but were arrived at by computing the simple average of the sale price for a representative number of deliveries around the 5th, 15th, and 25th of each month, as explained above.

The term "sale price" as used in connection with New England conditions reflects the price received for the coal delivered during each period and not the price current for the period during which the coal was delivered. The difference in the sale prices of the different companies is due to the quantity of the old orders that were filled during the period more than to differences in prices charged for current sales. The filling of these old orders also resulted in the average sale prices being considerably below the list prices as shown in a previous table giving the circular prices of the Metropolitan Coal Co. The Commission found very few instances where the list prices had been cut in taking orders; the demand for coal during all this period was greater than the supply.

The prices shown for companies No. 13 and No. 14 were not arrived at in the manner explained above, but are the actual weighted average of the prices of coal delivered. The records of these companies showed separately the coal delivered to consumers and that taken from the yard by purchasers. While these classes are not as detailed as those shown for the other companies, they are much more satisfactory, as they show actual average prices on these two classes of business. These companies also show the average price received for all coal of each grade and size sold. Company No. 12 also kept its records in such shape that the actual average price for each grade and size could be secured, and these figures are shown in addition to the typical prices for the different classes of business.

It will be seen that the column for household sales is the only one that is filled out for all companies.¹ Blanks in the other columns do not necessarily mean that a company sold only to the household trade, but mean that the Commission did not secure typical prices for these classes, either because they were relatively unimportant in the case of these dealers or were covered in other classifications.

Margins as shown in these tables were computed by subtracting the cost of the coal at the yard from the typical sale prices, or weighted average sales prices shown in the table. For company No. 12 the Commission has the actual margin received during this period, which ranged from 99 cents on broken coal for October to \$3.22 on nut coal in December. With the exception of the broken for September and October the margins for this company are all very high.

While very few of the retailers interviewed had definite ideas as to what their normal gross margin amounted to, the estimates ranged from \$1.40 per ton for companies No. 1 and No. 12 to \$2.20 for company No. 11. Under these circumstances the best measure of the advantage taken of the crisis is to compare the gross margins in October, November, and December with those of September.

¹ Household sales for Nos. 13 and 14 included in delivered-business column.

On the whole it will be observed from the tables that many of the Boston retailers increased their gross margins during the fall and early winter of 1916 by as much as \$1.50 to \$1.75 per net ton.

TABLE 33.—*Boston*——Summary for 14 representative retailers showing the minimum and maximum of cost prices, of typical and average sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916.

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 34 for detail by companies.]

	Broken.			Egg.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
SEPTEMBER.						
Cost price.....	\$4.79	\$5.68	\$5.06	\$5.28	\$6.08	\$5.46
Typical household sale price.....	6.85	7.22	.....	7.46	8.50	.....
Gross margin.....	1.54	2.17	.....	1.82	2.47	.....
Typical industrial contract sale price.....	6.39	6.67	.....	6.88	7.38	.....
Gross margin.....	1.15	1.67	.....	1.50	2.07	.....
Weighted average price, delivered business ¹	6.54	6.73	.....	7.51	7.63	.....
Gross margin.....	1.55	1.59	.....	2.01	2.27	.....
Typical yard sale price.....	5.91	6.05	.....	6.63	6.91	.....
Gross margin.....	.77	1.06	.....	.78	1.55	.....
Weighted average price, all business ²	6.52	6.69	.....	7.27	7.57	.....
Gross margin.....	1.44	1.55	.....	1.77	2.19	.....
OCTOBER.						
Cost price.....	4.79	5.75	5.12	5.29	6.00	5.61
Typical household sale price.....	7.04	7.33	.....	7.67	8.08	.....
Gross margin.....	1.58	2.35	.....	1.88	2.76	.....
Typical industrial contract sale price.....	6.44	6.75	.....	7.02	7.75	.....
Gross margin.....	1.09	1.75	.....	1.49	2.04	.....
Weighted average price, delivered business ¹	6.44	6.85	.....	7.68	7.69	.....
Gross margin.....	1.45	1.70	.....	1.91	2.32	.....
Typical yard sale price.....	6.11	6.50	.....	6.78	7.75	.....
Gross margin.....	.96	1.51	.....	1.00	2.04	.....
Weighted average price, all business ²	6.34	7.08	.....	7.58	7.65	.....
Gross margin.....	.99	2.09	.....	1.87	2.22	.....
NOVEMBER.						
Cost price.....	4.79	6.18	5.17	5.40	7.90	5.94
Typical household sale price.....	6.88	8.50	.....	7.96	10.00	.....
Gross margin.....	1.76	3.59	.....	1.93	3.95	.....
Typical industrial contract sale price.....	6.40	6.86	.....	7.01	9.08	.....
Gross margin.....	1.28	1.74	.....	1.53	3.37	.....
Weighted average price, delivered business ¹	6.88	7.79	.....	8.60	8.94	.....
Gross margin.....	1.86	2.61	.....	2.59	3.54	.....
Typical yard sale price.....	7.11	7.75	.....	7.25	8.75	.....
Gross margin.....	1.57	2.71	.....	1.22	3.16	.....
Weighted average price, all business ²	6.83	7.73	.....	7.85	8.89	.....
Gross margin.....	1.68	2.55	.....	2.37	3.49	.....
DECEMBER.						
Cost price.....	4.91	7.61	5.38	5.44	7.57	6.21
Typical household sale price.....	7.77	8.79	.....	8.17	10.00	.....
Gross margin.....	.52	3.67	.....	1.65	3.81	.....
Typical industrial contract sale price.....	6.40	7.83	.....	7.09	8.97	.....
Gross margin.....	.77	2.70	.....	1.08	3.46	.....
Weighted average price, delivered business ¹	6.84	7.98	.....	8.98	9.18	.....
Gross margin.....	1.82	2.71	.....	2.70	3.54	.....
Typical yard sale price.....	7.50	7.57	.....	8.36	8.75	.....
Gross margin.....	2.30	2.37	.....	1.88	3.30	.....
Weighted average price, all business ²	6.84	7.95	.....	7.99	9.13	.....
Gross margin.....	1.82	2.68	.....	2.45	3.54	.....

¹ Two companies only.

² Three companies only.

TABLE 33.—*Boston*——Summary for 14 representative retailers showing the minimum and maximum of cost prices, of typical and average sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916—Continued.

	Stove.			Chestnut.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
SEPTEMBER.						
Cost price.....	\$5.29	\$6.37	\$5.66	\$5.51	\$6.39	\$5.69
Typical household sale price.....	7.77	8.75	.....	7.82	8.75	.....
Gross margin.....	1.40	2.67	.....	1.69	2.53	.....
Typical industrial contract sale price.....	7.31	7.50	.....	7.50	7.50	.....
Gross margin.....	1.79	2.21	.....	1.92	1.92	.....
Weighted average price, delivered business ¹	7.89	8.00	.....	7.92	8.00	.....
Gross margin.....	2.17	2.41	.....	2.21	2.32	.....
Typical yard sale price.....	6.94	7.28	.....	7.00	7.30	.....
Gross margin.....	1.22	1.69	.....	1.46	1.73	.....
Weighted average price, all business ²	7.79	7.93	.....	7.81	7.94	.....
Gross margin.....	2.07	2.64	.....	2.10	2.43	.....
OCTOBER.						
Cost price.....	5.40	7.45	5.67	5.49	7.37	5.77
Typical household sale price.....	7.99	9.25	.....	7.92	9.50	.....
Gross margin.....	1.31	2.78	.....	1.51	2.70	.....
Typical industrial contract sale price.....	7.31	7.88	.....	.....	.....	.....
Gross margin.....	1.76	2.27	.....	.....	.....	.....
Weighted average price, delivered business ¹	7.96	8.20	.....	8.07	8.22	.....
Gross margin.....	2.21	2.61	.....	2.35	2.54	.....
Typical yard sale price.....	6.99	7.51	.....	7.14	7.56	.....
Gross margin.....	1.24	1.92	.....	1.51	1.88	.....
Weighted average price, all business ²	7.85	8.01	.....	7.93	8.08	.....
Gross margin.....	2.10	2.61	.....	2.21	2.51	.....
NOVEMBER.						
Cost price.....	5.39	7.44	5.88	5.49	8.21	6.05
Typical household sale price.....	8.20	10.00	.....	8.36	10.00	.....
Gross margin.....	1.39	3.71	.....	1.21	3.71	.....
Typical industrial contract sale price.....	7.42	9.25	.....	.....	.....	.....
Gross margin.....	2.03	3.50	.....	.....	.....	.....
Weighted average price, delivered business ¹	8.63	8.70	.....	8.86	9.02	.....
Gross margin.....	2.76	3.04	.....	2.92	3.21	.....
Typical yard sale price.....	8.21	8.67	.....	7.87	8.75	.....
Gross margin.....	2.27	2.99	.....	2.06	3.23	.....
Weighted average price, all business ²	8.31	8.65	.....	8.58	8.98	.....
Gross margin.....	2.71	3.04	.....	2.79	3.17	.....
DECEMBER.						
Cost price.....	5.44	8.89	6.35	5.59	8.49	6.44
Typical household sale price.....	8.12	10.00	.....	8.51	10.00	.....
Gross margin.....	.78	3.44	.....	1.07	3.61	.....
Typical industrial contract sale price.....	7.50	8.53	.....	.....	.....	.....
Gross margin.....	2.06	2.82	.....	.....	.....	.....
Weighted average price, delivered business ¹	8.29	9.20	.....	9.49	9.58	.....
Gross margin.....	2.57	2.63	.....	2.94	3.78	.....
Typical yard sale price.....	8.38	9.25	.....	8.65	8.87	.....
Gross margin.....	1.75	2.94	.....	2.03	3.07	.....
Weighted average price, all business ²	8.29	9.07	.....	8.81	9.41	.....
Gross margin.....	2.44	3.04	.....	2.77	3.61	.....

¹ Two companies only.

² Three companies only.

TABLE 33.—*Boston*——Summary for 14 representative retailers showing the minimum and maximum of cost prices, of typical and average sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916—Continued.

	Pea.			Buckwheat.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
SEPTEMBER.						
Cost price.....	\$3.65	\$4.75	\$4.18	\$2.57	\$3.46	\$3.40
Typical household sale price.....	5.75	6.29				
Gross margin.....	1.49	2.41				
Typical industrial contract sale price.....	5.50	5.74		4.75	4.75	
Gross margin.....	1.46	1.50		1.35	1.35	
Weighted average price, delivered busi- ness ¹	5.88	5.93		5.33	5.33	
Gross margin.....	1.61	2.00		2.76	2.76	
Typical yard sale price.....	4.95	5.56				
Gross margin.....	.65	1.63				
Weighted average price, all business ²	5.78	6.00		4.75	5.33	
Gross margin.....	1.51	2.35		1.29	2.76	
OCTOBER.						
Cost price.....	3.76	4.84	4.22	2.57	3.46	3.28
Typical household sale price.....	5.99	6.43				
Gross margin.....	1.20	2.33				
Typical industrial contract sale price.....	5.50	5.75		4.96	4.96	
Gross margin.....	.95	1.41		1.56	1.56	
Weighted average price, delivered busi- ness ¹	6.03	6.04		5.08	5.08	
Gross margin.....	1.78	2.10		2.51	2.51	
Typical yard sale price.....	5.14	5.61				
Gross margin.....	.72	1.68				
Weighted average price, all business ²	5.93	6.11		5.08	5.09	
Gross margin.....	1.67	2.35		1.63	2.51	
NOVEMBER.						
Cost price.....	3.84	6.28	4.57	3.44	3.46	3.45
Typical household sale price.....	6.15	7.40				
Gross margin.....	.99	3.13				
Typical industrial contract sale price.....	5.75	6.17		5.03	5.03	
Gross margin.....	.95	1.68		1.59	1.59	
Weighted average price, delivered busi- ness ¹	6.89	7.45				
Gross margin.....	2.16	3.30				
Typical yard sale price.....	6.22	6.89				
Gross margin.....	1.49	2.74				
Weighted average price, all business ²	6.62	7.41		4.94	4.94	
Gross margin.....	2.07	3.26		1.48	1.48	
DECEMBER.						
Cost price.....	3.92	6.47	4.76	3.44	3.46	3.45
Typical household sale price.....	6.64	8.00				
Gross margin.....	1.53	3.30				
Typical industrial contract sale price.....	7.12	7.12		4.75	4.75	
Gross margin.....	2.10	2.10		1.31	1.31	
Weighted average price, delivered busi- ness ¹	7.34	7.35				
Gross margin.....	2.48	3.20				
Typical yard sale price.....	6.42	6.83				
Gross margin.....	1.56	2.68				
Weighted average price, all business ²	6.96	7.31		4.77	4.77	
Gross margin.....	2.38	3.16		1.31	1.31	

¹ Two companies only.

² Three companies only.

TABLE 33.—*Boston*—Summary for 14 representative retailers showing the minimum and maximum of cost prices, of typical and average sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916—Continued.

	Screenings.			Birdseye.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
SEPTEMBER.						
Cost price.....	\$1.72	\$2.34	\$2.00	\$2.61	\$2.61	\$2.61
Typical industrial contract sale price....	3.25	3.25	.....	3.35	3.35	.....
Gross margin.....	1.03	1.53	.....	.74	.74	.....
Weighted average price, delivered busi- ness ¹	3.25	3.25	.....	.....	.....	.....
Gross margin.....	.91	.91	.....	.....	.....	.....
Weighted average price, all business ² ...	3.13	3.25	.....	.....	.....	.....
Gross margin.....	.91	1.41	.....	.....	.....	.....
OCTOBER.						
Cost price.....	1.91	2.82	2.27	2.61	2.61	2.61
Typical industrial contract sale price....	3.12	3.25	.....	3.35	3.35	.....
Gross margin.....	.30	1.34	.....	.74	.74	.....
Weighted average price, delivered busi- ness ¹	3.25	3.29	.....	.....	.....	.....
Gross margin.....	.93	.95	.....	.....	.....	.....
Typical yard sale price.....	2.35	2.35	.....	.....	.....	.....
Gross margin.....	.03	.03	.....	.....	.....	.....
Weighted average price, all business ² ...	3.10	3.29	.....	.....	.....	.....
Gross margin.....	.79	1.19	.....	.....	.....	.....
NOVEMBER.						
Cost price.....	2.16	2.66	2.52	2.61	2.61	2.61
Typical industrial contract sale price....	3.75	3.75	.....	3.50	3.50	.....
Gross margin.....	1.52	1.52	.....	.89	.89	.....
Weighted average price, delivered busi- ness ¹	3.70	3.87	.....	.....	.....	.....
Gross margin.....	1.04	1.24	.....	.....	.....	.....
Typical yard sale price.....	3.00	3.00	.....	.....	.....	.....
Gross margin.....	.37	.37	.....	.....	.....	.....
Weighted average price, all business ² ...	3.19	3.81	.....	.....	.....	.....
Gross margin.....	1.03	1.18	.....	.....	.....	.....
DECEMBER.						
Cost price.....	2.23	2.66	2.59	2.61	2.61	2.61
Typical industrial contract sale price....	4.00	4.00	.....	3.79	3.79	.....
Gross margin.....	1.77	1.77	.....	1.18	1.18	.....
Weighted average price, delivered busi- ness ¹	3.85	3.96	.....	.....	.....	.....
Gross margin.....	1.19	1.33	.....	.....	.....	.....
Typical yard sale price.....	3.40	3.40	.....	.....	.....	.....
Gross margin.....	.77	.77	.....	.....	.....	.....
Weighted average price, all business ² ...	3.23	3.93	.....	.....	.....	.....
Gross margin.....	.61	1.30	.....	.....	.....	.....

¹ Two companies only.

² Three companies only.

TABLE 34.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916.

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 33 for summary of this table.]

BROKEN COAL.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 4.....	\$4.79	\$6.94	\$2.15	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.07	6.90	1.83	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	4.91	6.92	2.01	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.07	6.88	1.81	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.00	7.17	2.17	\$6.67	\$1.67	.....	.....	.....	.....	.....	.....
No. 9 (wharf yards).....	5.04	6.93	1.89	6.67	1.63	.....	.....	.....	.....	.....	.....
No. 9 (rail yards).....	5.68	7.22	1.54	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	4.90	6.85	1.95	6.40	1.50	.....	.....	.....	.....	.....	.....
No. 12.....	5.24	7.04	1.80	6.39	1.15	.....	.....	.....	.....	.....	.....
No. 13.....	5.14	.....	.....	.....	.....	\$6.73	\$1.59	³ \$5.91	\$0.77	\$6.68	\$1.44
No. 14.....	4.99	.....	.....	.....	.....	6.54	1.55	³ 6.05	1.06	6.52	1.55
Minimum.....	4.79	6.85	1.54	6.39	1.15	6.54	1.55	5.91	.77	6.52	1.44
Maximum.....	5.68	7.22	2.17	6.67	1.67	6.73	1.59	6.05	1.06	6.69	1.55
Weighted average.....	5.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 4.....	\$4.79	\$7.04	\$2.25	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.09	7.17	2.08	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	4.91	7.25	2.34	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.07	7.04	1.97	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.00	7.25	2.25	\$6.75	\$1.75	.....	.....	.....	.....	.....	.....
No. 9 (wharf yards).....	5.09	7.07	1.98	6.71	1.62	.....	.....	\$6.50	\$1.41	.....	.....
No. 9 (rail yards).....	5.75	7.33	1.58	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	4.94	7.29	2.35	6.50	1.56	.....	.....	.....	.....	.....	.....
No. 12.....	5.35	7.33	1.98	6.44	1.09	.....	.....	.....	.....	.....	.....
No. 13.....	5.15	.....	.....	.....	.....	\$6.85	\$1.70	³ 6.11	.96	\$6.34	\$0.99
No. 14.....	4.99	.....	.....	.....	.....	6.44	1.45	³ 6.50	1.51	6.79	1.64
Minimum.....	4.79	7.04	1.58	6.44	1.09	6.44	1.45	6.11	.96	6.34	.99
Maximum.....	5.75	7.33	2.35	6.75	1.75	6.85	1.70	6.50	1.51	7.08	2.09
Weighted average.....	5.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Two companies only.

² Three companies only.

³ Weighted average.

TABLE 34.—*Boston—Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.*

BROKEN COAL—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 4.....	\$4.79	\$6.88	\$2.09	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.14	7.61	2.47	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	4.91	8.50	3.59	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.07	8.03	2.96	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	6.18	8.46	2.28	.....	.....	.....	.....	\$7.75	\$1.57	.....	.....
No. 9 (wharf yards).....	5.12	7.31	2.19	\$6.86	\$1.74	.....	.....	7.58	2.46	.....	.....
No. 9 (rail yards).....	5.75	7.92	2.17	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	4.94	8.50	3.56	6.40	1.46	.....	.....	.....	.....	\$6.83	\$1.68
No. 12.....	5.15	6.91	1.76	6.43	1.28	.....	.....	.....	.....	7.73	2.55
No. 13.....	5.18	.....	.....	.....	.....	\$7.79	\$2.61	³ 7.11	1.93	7.73	2.55
No. 14.....	5.02	.....	.....	.....	.....	6.88	1.86	³ 7.73	2.71	6.97	1.95
Minimum.....	4.79	6.88	1.76	6.40	1.28	6.88	1.86	7.11	1.57	6.83	1.68
Maximum.....	6.18	8.50	3.59	6.86	1.74	7.79	2.61	7.75	2.71	7.73	2.55
Weighted average.....	5.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 4.....	\$7.61	\$8.13	\$0.52	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.14	8.33	3.19	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	4.91	8.58	3.67	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.07	8.67	3.60	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	6.26	3.50	2.24	\$7.03	\$0.77	.....	.....	.....	.....	.....	.....
No. 9 (wharf yards).....	5.13	8.25	3.12	7.83	2.70	.....	.....	\$7.50	\$2.37	.....	.....
No. 9 (rail yards).....	5.75	8.79	3.04	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	5.42	8.42	3.00	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	5.22	7.77	2.55	6.40	1.18	.....	.....	.....	.....	\$7.12	\$1.90
No. 13.....	5.27	.....	.....	.....	.....	\$7.98	\$2.71	³ 7.57	2.30	7.95	2.68
No. 14.....	5.02	.....	.....	.....	.....	6.84	1.82	.....	.....	6.84	1.82
Minimum.....	4.91	7.77	.52	6.40	.77	6.84	1.82	7.50	2.30	6.84	1.82
Maximum.....	7.61	8.79	3.67	7.83	2.70	7.98	2.71	7.57	2.37	7.95	2.68
Weighted average.....	5.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—*Boston*—Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

EGG COAL.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.08	\$8.50	\$2.42								
No. 2.....	6.04	7.86	1.82								
No. 3.....	5.63	7.63	2.00								
No. 4.....	5.58	7.83	2.25								
No. 5.....	5.47	7.59	2.12								
No. 6.....	5.36	7.79	2.43								
No. 7.....	5.42	7.46	2.04								
No. 8.....	5.31	7.67	2.36	\$7.38	\$2.07						
No. 9 (wharf yards).....	5.37	7.64	2.27	7.11	1.74			\$6.63	\$1.26		
No. 9 (rail yards).....	5.97	7.93	1.96					6.75	.78		
No. 10.....	5.36	7.66	2.30								
No. 11.....	5.28	7.75	2.47	7.22	1.94						
No. 12.....	5.38	7.65	2.27	6.88	1.50					\$7.57	\$2.19
No. 13.....	5.50					\$7.51	\$2.01	³ 6.65	1.15	7.27	1.77
No. 14.....	5.36					7.63	2.27	³ 6.91	1.55	7.49	2.13
Minimum.....	5.28	7.46	1.82	6.88	1.50	7.51	2.01	6.63	.78	7.27	1.77
Maximum.....	6.08	8.50	2.47	7.38	2.07	7.63	2.27	6.91	1.55	7.57	2.19
Weighted average.....	5.46										

Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....											
No. 2.....	\$5.97	\$7.85	\$1.88								
No. 3.....	5.59	7.67	2.08								
No. 4.....	5.58	8.00	2.42								
No. 5.....	5.46	7.92	2.46								
No. 6.....	5.46	7.96	2.50								
No. 7.....	5.42	8.08	2.66								
No. 8.....	5.71	8.06	2.35	\$7.75	\$2.04			\$7.75	\$2.04		
No. 9 (wharf yards).....	5.42	7.78	2.36	7.24	1.82						
No. 9 (rail yards).....	6.00	7.95	1.95								
No. 10.....	5.38	7.87	2.49								
No. 11.....	5.29	8.05	2.76	7.25	1.96						
No. 12.....	5.53	7.81	2.28	7.02	1.49					\$7.58	\$2.05
No. 13.....	5.78					\$7.69	\$1.91	³ 6.78	1.00	7.65	1.87
No. 14.....	5.36					7.68	2.32	³ 7.31	1.95	7.58	2.22
Minimum.....	5.29	7.67	1.88	7.02	1.49	7.68	1.91	6.78	1.00	7.58	1.87
Maximum.....	6.00	8.08	2.76	7.75	2.04	7.69	2.32	7.75	2.04	7.65	2.22
Weighted average.....	5.61										

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—Boston——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

EGG COAL—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.90	\$10.00	\$2.10								
No. 2.....	6.79	9.18	2.39								
No. 3.....	6.09	8.25	2.16								
No. 4.....	5.58	9.53	3.95								
No. 5.....	5.52	9.28	3.76								
No. 6.....	5.66	8.71	3.05								
No. 7.....	6.80	8.94	2.14								
No. 8.....	5.71	9.43	3.72	\$9.08	\$3.37			\$8.75	\$3.04		
No. 9 (wharf yards).....	5.47	7.96	2.49	7.87	2.40			8.63	3.16		
No. 9 (rail yards).....	6.03	8.35	2.32					7.25	1.22		
No. 10.....	6.49	8.42	1.93								
No. 11.....	6.12	9.30	3.18	8.25	2.13						
No. 12.....	5.48	8.34	2.86	7.01	1.53						
No. 13.....	6.01					\$8.60	\$2.59	* 8.19	2.18	\$7.85	\$2.37
No. 14.....	5.40					8.94	3.54	* 7.87	2.47	8.57	2.56
Minimum.....	5.40	7.96	1.93	7.01	1.53	8.60	2.59	7.25	1.22	7.85	2.37
Maximum.....	7.90	10.00	3.95	9.08	3.37	8.94	3.54	8.75	3.16	8.89	3.49
Weighted average.....	5.94										

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.57	\$10.00	\$2.43								
No. 2.....	7.05	9.25	2.20								
No. 3.....	6.52	8.17	1.65								
No. 4.....	6.89	9.87	2.98								
No. 5.....	5.52	9.33	3.81								
No. 6.....	7.32	9.58	2.26								
No. 7.....	7.53	9.36	1.83								
No. 8.....	5.99	8.79	2.80	\$8.50	\$2.51			\$8.75	\$2.76		
No. 9 (wharf yards).....	5.51	8.75	3.24	8.97	3.46			8.50	2.99		
No. 9 (rail yards).....	6.05	9.42	3.37								
No. 10.....	5.86	9.16	3.30								
No. 11.....	6.01	9.44	3.43	7.09	1.08						
No. 12.....	5.54	8.31	2.77	7.17	1.63					\$7.99	\$2.45
No. 13.....	6.48					\$9.18	\$2.70	* 8.36	1.88	9.13	2.65
No. 14.....	5.44					8.98	3.54	* 8.74	3.30	8.98	3.54
Minimum.....	5.44	8.17	1.65	7.09	1.08	8.98	2.70	8.36	1.88	7.99	2.45
Maximum.....	7.57	10.00	3.81	8.97	3.46	9.18	3.54	8.75	3.30	9.13	3.54
Weighted average.....	6.21										

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

STOVE COAL.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.25	\$8.75	\$2.50	.....	.....	.....	.....	.....	.....	.....	.....
No. 2.....	6.37	7.77	1.40	.....	.....	.....	.....	.....	.....	.....	.....
No. 3.....	5.66	7.92	2.26	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	6.01	8.21	2.20	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.69	7.85	2.16	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	5.63	8.21	2.58	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.44	7.92	2.48	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.75	8.17	2.42	.....	.....	.....	.....	.....	.....	.....	.....
No. 9 (wharf yards).....	5.51	7.84	2.33	\$7.47	\$1.96	.....	.....	\$7.00	\$1.25	.....	.....
No. 9 (rail yards).....	6.06	8.13	2.07	.....	.....	.....	.....	7.02	1.51	.....	.....
No. 10.....	5.55	7.91	2.36	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	5.52	7.91	2.39	7.31	1.79	.....	.....	.....	.....	.....	.....
No. 12.....	5.29	7.96	2.67	7.50	2.21	.....	.....	.....	.....	.....	.....
No. 13.....	5.72	.....	.....	.....	.....	\$7.89	\$2.17	³ 6.94	1.22	\$7.93	\$2.64
No. 14.....	5.59	.....	.....	.....	.....	8.00	2.41	³ 7.28	1.69	7.79	2.07
Minimum.....	5.29	7.77	1.40	7.31	1.79	7.89	2.17	6.94	1.22	7.79	2.07
Maximum.....	6.37	8.75	2.67	7.50	2.21	8.00	2.41	7.28	1.69	7.93	2.64
Weighted average.....	5.66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.45	\$9.25	\$1.80	.....	.....	.....	.....	.....	.....	.....	.....
No. 2.....	6.68	7.99	1.31	.....	.....	.....	.....	.....	.....	.....	.....
No. 3.....	5.66	8.09	2.43	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	6.01	8.19	2.18	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.69	8.33	2.64	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	5.70	8.29	2.59	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.44	8.22	2.78	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.75	8.19	2.44	.....	.....	.....	.....	.....	.....	.....	.....
No. 9 (wharf yards).....	5.61	8.07	2.46	\$7.88	\$2.27	.....	.....	\$7.36	\$1.61	.....	.....
No. 9 (rail yards).....	6.22	8.33	2.11	.....	.....	.....	.....	7.18	1.57	.....	.....
No. 10.....	5.57	8.11	2.54	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	5.55	8.27	2.72	7.31	1.76	.....	.....	.....	.....	.....	.....
No. 12.....	5.40	8.04	2.64	.....	.....	.....	.....	.....	.....	.....	.....
No. 13.....	5.75	.....	.....	.....	.....	\$7.96	\$2.21	³ 6.99	1.24	\$8.01	\$2.61
No. 14.....	5.59	.....	.....	.....	.....	8.20	2.61	³ 7.51	1.92	7.85	2.10
Minimum.....	5.40	7.99	1.31	7.31	1.76	7.96	2.21	6.99	1.24	7.85	2.10
Maximum.....	7.45	9.25	2.78	7.88	2.27	8.20	2.61	7.51	1.92	8.01	2.61
Weighted average.....	5.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—*Boston*—Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

STOVE COAL—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.29	\$10.00	\$3.71								
No. 2.....	7.44	8.83	1.39								
No. 3.....	6.06	8.57	2.51								
No. 4.....	6.01	9.21	3.20								
No. 5.....	5.69	8.59	2.90								
No. 6.....	6.25	9.38	3.13								
No. 7.....	5.44	9.09	3.65								
No. 8.....	5.75	9.27	3.52	\$9.25	\$3.50						
No. 9 (wharf yards).....	5.68	8.20	2.52	8.36	2.68			\$8.67	\$2.99		
No. 9 (rail yards).....	6.29	8.61	2.32								
No. 10.....	5.97	8.66	2.69								
No. 11.....	6.06	9.36	3.30								
No. 12.....	5.39	8.56	3.17	7.42	2.03						
No. 13.....	5.94					\$8.70	\$2.76	* 8.21	2.27	\$8.31	\$2.92
No. 14.....	5.59					8.63	3.04			8.65	2.71
Minimum.....	5.39	8.20	1.39	7.42	2.03	8.63	2.76	8.21	2.27	8.31	2.71
Maximum.....	7.44	10.00	3.71	9.25	3.50	8.70	3.04	8.67	2.99	8.65	3.04
Weighted average.....	5.88										

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$8.34	\$10.00	\$1.66								
No. 2.....	7.19	9.19	2.00								
No. 3.....	6.77	8.34	1.57								
No. 4.....	8.89	9.67	.78								
No. 5.....	5.80	9.18	3.38								
No. 6.....	8.34	9.83	1.49								
No. 7.....	6.64	9.38	2.74								
No. 8.....	5.83	9.22	3.39					\$8.75	\$2.92		
No. 9 (wharf yards).....	5.71	9.11	3.40	\$8.53	\$2.82			8.50	2.79		
No. 9 (rail yards).....	6.31	9.75	3.44					9.25	2.94		
No. 10.....	5.96	9.04	3.08								
No. 11.....	6.07	9.35	3.28								
No. 12.....	5.44	8.12	2.68	7.50	2.06					\$8.48	\$3.04
No. 13.....	6.63					\$9.20	\$2.57	* 8.38	1.75	9.07	2.44
No. 14.....	5.66					8.29	2.63			8.29	2.63
Minimum.....	5.44	8.12	.78	7.50	2.06	8.29	2.57	8.38	1.75	8.29	2.44
Maximum.....	8.89	10.00	3.44	8.53	2.82	9.20	2.63	9.25	2.94	9.07	3.04
Weighted average.....	6.35										

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

CHESTNUT COAL.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.30	\$8.75	\$2.45	.....	.....	.....	.....	.....	.....	.....	.....
No. 2.....	6.12	7.82	1.70	.....	.....	.....	.....	.....	.....	.....	.....
No. 3.....	5.67	7.92	2.25	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	6.39	8.08	1.69	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.70	7.94	2.24	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	5.64	8.17	2.53	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.60	8.04	2.44	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.52	8.00	2.48	.....	.....	.....	.....	\$7.25	\$1.73	.....	.....
No. 9 (wharf yards).....	5.54	7.90	2.36	.....	.....	.....	.....	7.00	1.46	.....	.....
No. 9 (rail yards).....	6.13	8.06	1.93	.....	.....	.....	.....	.....	.....	.....	.....
No. 10.....	5.60	7.98	2.38	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	5.58	7.95	2.37	\$7.50	\$1.92	.....	.....	.....	.....	.....	.....
No. 12.....	5.51	7.97	2.46	.....	.....	.....	.....	.....	.....	.....	.....
No. 13.....	5.71	.....	.....	.....	.....	\$7.92	\$2.21	³ 7.18	1.47	\$7.94	\$2.43
No. 14.....	5.68	.....	.....	.....	.....	8.00	2.32	³ 7.30	1.62	7.86	2.18
Minimum.....	5.51	7.82	1.69	7.50	1.92	7.92	2.21	7.00	1.46	7.81	2.10
Maximum.....	6.39	8.75	2.53	7.50	1.92	8.00	2.32	7.30	1.73	7.94	2.43
Weighted average.....	5.69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.37	\$9.50	\$2.13	.....	.....	.....	.....	.....	.....	.....	.....
No. 2.....	6.51	8.02	1.51	.....	.....	.....	.....	.....	.....	.....	.....
No. 3.....	6.33	7.92	1.59	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	6.39	8.28	1.89	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.73	7.97	2.24	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	5.64	8.25	2.61	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.65	8.19	2.54	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.52	8.22	2.70	.....	.....	.....	.....	\$7.28	\$1.76	.....	.....
No. 9 (wharf yards).....	5.63	8.01	2.38	.....	.....	.....	.....	7.14	1.51	.....	.....
No. 9 (rail yards).....	6.13	8.21	2.08	.....	.....	.....	.....	.....	.....	.....	.....
No. 10.....	5.64	8.04	2.40	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	5.63	8.21	2.58	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	5.49	8.02	2.53	.....	.....	.....	.....	.....	.....	.....	.....
No. 13.....	5.72	.....	.....	.....	.....	\$8.07	\$2.35	³ 7.39	1.67	\$8.00	\$2.51
No. 14.....	5.68	.....	.....	.....	.....	8.22	2.54	³ 7.56	1.88	7.93	2.21
Minimum.....	5.49	7.92	1.51	.....	.....	8.07	2.35	7.14	1.51	7.93	2.21
Maximum.....	7.37	9.50	2.70	.....	.....	8.22	2.54	7.56	1.88	8.08	2.51
Weighted average.....	5.77	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Two companies only.²Three companies only.

Weighted average.

TABLE 34.—*Boston*—Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

CHESTNUT COAL—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.79	\$10.00	\$2.21	.....	.....	.....	.....	.....	.....	.....	.....
No. 2.....	8.21	9.42	1.21	.....	.....	.....	.....	.....	.....	.....	.....
No. 3.....	7.12	8.59	1.47	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	8.03	9.33	1.30	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.75	8.88	3.13	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	6.22	9.42	3.20	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.65	9.33	3.68	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	5.52	9.23	3.71	.....	.....	.....	.....	\$8.75	\$3.23	.....	.....
No. 9 (wharf yards).....	5.93	8.36	2.43	.....	.....	.....	.....	8.71	2.78	.....	.....
No. 9 (rail yards).....	6.21	8.88	2.67	.....	.....	.....	.....	.....	.....	.....	.....
No. 10.....	6.46	8.77	2.31	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	6.02	9.25	3.23	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	5.49	8.50	3.01	.....	.....	.....	.....	.....	.....	.....	.....
No. 13.....	5.94	.....	.....	.....	.....	\$8.86	\$2.92	* 8.30	2.36	\$8.58	\$3.09
No. 14.....	5.81	.....	.....	.....	.....	9.02	3.21	* 7.87	2.06	8.98	3.17
Minimum.....	5.49	8.36	1.21	.....	.....	8.86	2.92	7.87	2.06	8.58	2.79
Maximum.....	8.21	10.00	3.71	.....	.....	9.02	3.21	8.75	3.23	8.98	3.17
Weighted average.....	6.05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.84	\$10.00	\$2.16	.....	.....	.....	.....	.....	.....	.....	.....
No. 2.....	7.89	9.22	1.33	.....	.....	.....	.....	.....	.....	.....	.....
No. 3.....	6.78	8.89	2.11	.....	.....	.....	.....	.....	.....	.....	.....
No. 4.....	8.49	9.56	1.07	.....	.....	.....	.....	.....	.....	.....	.....
No. 5.....	5.75	9.36	3.61	.....	.....	.....	.....	.....	.....	.....	.....
No. 6.....	7.08	9.50	2.42	.....	.....	.....	.....	.....	.....	.....	.....
No. 7.....	5.95	9.46	3.51	.....	.....	.....	.....	.....	.....	.....	.....
No. 8.....	6.72	9.50	2.78	.....	.....	.....	.....	\$8.75	\$2.03	.....	.....
No. 9 (wharf yards).....	5.88	8.96	3.08	.....	.....	.....	.....	8.65	2.77	.....	.....
No. 9 (rail yards).....	6.26	9.11	2.85	.....	.....	.....	.....	.....	.....	.....	.....
No. 10.....	6.19	9.09	2.90	.....	.....	.....	.....	.....	.....	.....	.....
No. 11.....	5.96	9.44	3.48	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	5.59	8.51	2.92	.....	.....	.....	.....	.....	.....	\$8.81	\$3.22
No. 13.....	6.55	.....	.....	.....	.....	\$9.49	\$2.94	* 8.78	2.23	9.32	2.77
No. 14.....	5.80	.....	.....	.....	.....	9.58	3.78	* 8.87	3.07	9.41	3.61
Minimum.....	5.59	8.51	1.07	.....	.....	9.49	\$2.94	8.65	2.03	8.81	2.77
Maximum.....	8.49	10.00	3.61	.....	.....	9.58	3.78	8.87	3.07	9.41	3.61
Weighted average.....	6.44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

PEA.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....											
No. 2.....	\$4.75	\$6.29	\$1.54								
No. 4.....	4.44	5.96	1.52								
No. 5.....	3.97	5.96	1.99								
No. 6.....	3.88	5.97	2.09								
No. 7.....	4.20	5.75	1.55								
No. 8.....	4.60	6.13	1.53					\$5.25	\$0.65		
No. 9 (wharf yards).....	4.24	5.89	1.65	\$5.74	\$1.50						
No. 9 (rail yards).....	4.68	6.17	1.49								
No. 11.....	4.04	6.06	2.02	5.50	1.46						
No. 12.....	3.65	6.06	2.41								
No. 13.....	4.27					\$5.88	\$1.61	³ 4.95	.68	\$6.00	\$2.35
No. 14.....	3.93					5.93	2.00	³ 5.56	1.63	5.91	1.98
Minimum.....	3.65	5.75	1.49	5.50	1.46	5.88	1.61	4.95	.65	5.78	1.51
Maximum.....	4.75	6.29	2.41	5.74	1.50	5.93	2.00	5.56	1.63	6.00	2.35
Weighted average.....	4.18										
Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....											
No. 2.....	\$4.84	\$6.04	\$1.20								
No. 4.....	4.44	6.17	1.73								
No. 5.....	4.18	6.08	1.90								
No. 6.....	3.88	6.21	2.33								
No. 7.....	4.20	6.17	1.97								
No. 8.....	4.60	6.16	1.56					\$5.32	\$0.72		
No. 9 (wharf yards).....	4.30	5.99	1.69	\$5.71	\$1.41						
No. 9 (rail yards.).....	4.80	6.43	1.63	5.75	.95						
No. 11.....	4.13	6.25	2.12	5.50	1.37						
No. 12.....	3.76	6.09	2.33								
No. 13.....	4.26					\$6.04	\$1.78	³ 5.14	.88	\$6.11	\$2.35
No. 14.....	3.93					6.03	2.10	³ 5.61	1.68	5.93	1.67
Minimum.....	3.76	5.99	1.20	5.50	.95	6.03	1.78	5.14	.72	5.93	1.67
Maximum.....	4.84	6.43	2.33	5.75	1.41	6.04	2.10	5.61	1.68	6.11	2.35
Weighted average.....	4.22										

¹Two companies only.²Three companies only.³Weighted average.

TABLE 34.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

PEA—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....											
No. 2.....	\$6.28	\$7.27	\$0.99								
No. 4.....	4.44	7.39	2.95								
No. 5.....	4.18	6.70	2.52								
No. 6.....	5.28	7.33	2.05								
No. 7.....	4.20	7.33	3.13								
No. 8.....	4.60	7.33	2.73					\$6.75	\$2.15		
No. 9 (wharf yards).....	4.49	6.15	1.66	\$6.17	\$1.68			6.50	2.01		
No. 9 (rail yards).....	4.80	7.40	2.60	5.75	.95						
No. 11.....	4.13	7.04	2.91								
No. 12.....	3.84	6.60	2.76								
No. 13.....	4.73					\$6.89	\$2.16	² 6.22	1.49	\$6.62	\$2.78
No. 14.....	4.15					7.45	3.30	² 6.89	2.74	7.41	3.26
Minimum.....	3.84	6.15	.99	5.75	.95	6.89	2.16	6.22	1.49	6.62	2.07
Maximum.....	6.28	7.40	3.13	6.17	1.68	7.45	3.30	6.89	2.74	7.41	3.26
Weighted average.....	4.57										

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.47	\$8.00	\$1.53								
No. 2.....	5.65	7.29	1.64								
No. 4.....	5.58	8.00	2.42								
No. 5.....	4.18	7.04	2.86								
No. 6.....	5.28	7.42	2.14								
No. 7.....	4.20	7.50	3.30								
No. 8.....	4.76	7.50	2.74					\$6.75	\$1.99		
No. 9 (wharf yards).....	5.02	7.00	1.98	\$7.12	\$2.10						
No. 9 (rail yards).....	4.80	7.78	2.98								
No. 11.....	4.13	7.41	3.28								
No. 12.....	3.92	6.64	2.72								
No. 13.....	4.86					\$7.34	\$2.48	² 6.42	1.56	\$6.96	\$3.04
No. 14.....	4.15					7.35	3.20	² 6.83	2.68	7.31	3.16
Minimum.....	3.92	6.64	1.53	7.12	2.10	7.34	2.48	6.42	1.56	6.96	2.38
Maximum.....	6.47	8.00	3.30	7.12	2.10	7.35	3.20	6.83	2.68	7.31	3.16
Weighted average.....	4.76										

¹Two companies only.²Three companies only.³Weighted average.

TABLE 34.—*Boston*——*Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.*

BUCKWHEAT.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 9 (wharf yards)....	\$3.40	.....	.....	\$4.75	\$1.35	.....	.....	.....	.....	.....	.....
No. 12.....	3.46	.....	.....	.....	.....	.....	.....	.....	.....	\$4.75	\$1.29
No. 13.....	2.57	.....	.....	.....	.....	\$5.33	\$2.76	.....	.....	5.33	2.76
Minimum.....	2.57	.....	.....	4.75	1.35	5.33	2.76	.....	.....	4.75	1.29
Maximum.....	3.46	.....	.....	4.75	1.35	5.33	2.76	.....	.....	5.33	2.76
Weighted average.....	3.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 9 (wharf yards)....	\$3.40	.....	.....	\$4.96	\$1.56	.....	.....	.....	.....	.....	.....
No. 12.....	3.46	.....	.....	.....	.....	.....	.....	.....	.....	\$5.09	\$1.63
No. 13.....	2.57	.....	.....	.....	.....	\$5.08	\$2.51	.....	.....	5.08	2.51
Minimum.....	2.57	.....	.....	4.96	1.56	5.08	2.51	.....	.....	5.08	1.63
Maximum.....	3.46	.....	.....	4.96	1.56	5.08	2.51	.....	.....	5.09	2.51
Weighted average.....	3.28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ One company only.² Two companies only.

TABLE 34.—*Boston*—*Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.*

BUCKWHEAT—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business.		Yard.		Weighted average of all business. ¹	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 9 (wharf yards).....	\$3.44	.....	.....	\$5.03	\$1.59	.....	.....	.....	.....	.....	.....
No. 12.....	3.46	.....	.....	.....	.....	.....	.....	.....	.....	\$4.94	\$1.48
Minimum.....	3.44	.....	.....	5.03	1.59	.....	.....	.....	.....	4.94	1.48
Maximum.....	3.46	.....	.....	5.03	1.59	.....	.....	.....	.....	4.94	1.48
Weighted average.....	3.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business.		Yard.		Weighted average of all business. ¹	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 9 (wharf yards).....	\$3.44	.....	.....	\$4.75	\$1.31	.....	.....	.....	.....	.....	.....
No. 12.....	3.46	.....	.....	.....	.....	.....	.....	.....	.....	\$4.77	\$1.31
Minimum.....	3.44	.....	.....	4.75	1.31	.....	.....	.....	.....	4.77	1.31
Maximum.....	3.46	.....	.....	4.75	1.31	.....	.....	.....	.....	4.77	1.31
Weighted average.....	3.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ One company only.

TABLE 34.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

SCREENINGS.

Company.	September.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 7.....	\$2.22	.....	.....	\$3.25	\$1.03	.....	.....	.....	.....	.....	.....
No. 8.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	1.72	.....	.....	3.25	1.53	.....	.....	.....	.....	\$3.13	\$1.41
No. 13.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 14.....	2.34	.....	.....	.....	.....	\$3.25	\$0.91	.....	.....	3.25	.91
Minimum.....	1.72	.....	.....	3.25	1.03	3.25	.91	.....	.....	3.13	.91
Maximum.....	2.34	.....	.....	3.25	1.53	3.25	.91	.....	.....	3.25	1.41
Weighted average.....	2.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	October.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 7.....	\$2.23	.....	.....	\$3.25	\$1.02	.....	.....	.....	.....	.....	.....
No. 8.....	2.82	.....	.....	3.12	.30	.....	.....	.....	.....	.....	.....
No. 12.....	1.91	.....	.....	3.25	1.34	.....	.....	.....	.....	.....	.....
No. 13.....	2.32	.....	.....	.....	.....	\$3.25	\$0.93	\$2.35	\$0.03	\$3.10	\$1.19
No. 14.....	2.34	.....	.....	.....	.....	3.29	.95	.....	.....	3.29	.95
Minimum.....	1.91	.....	.....	3.12	.30	3.25	.93	2.35	.03	3.10	.79
Maximum.....	2.82	.....	.....	3.25	1.34	3.29	.95	2.35	.03	3.29	1.19
Weighted average.....	2.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 34.—*Boston*—Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 14 representative dealers, September—December, 1916—Continued.

SCREENINGS—Continued.

Company.	November.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 7.....	\$2.23	.....	.....	\$3.75	\$1.52	.....	.....	.....	.....	.....	.....
No. 8.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	2.16	.....	.....	.....	.....	.....	.....	.....	.....	\$3.19	\$1.03
No. 13.....	2.63	.....	.....	.....	.....	\$3.87	\$1.24	\$3.00	\$0.37	3.81	1.18
No. 14.....	2.66	.....	.....	.....	.....	3.70	1.04	.....	.....	3.70	1.04
Minimum.....	2.16	.....	.....	3.75	1.52	3.70	1.04	3.00	.37	3.19	1.03
Maximum.....	2.66	.....	.....	3.75	1.52	3.87	1.24	3.00	.37	3.81	1.18
Weighted average.....	2.52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Company.	December.										
	Cost price.	Household.		Industrial contract.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 7.....	\$2.23	.....	.....	\$4.00	\$1.77	.....	.....	.....	.....	.....	.....
No. 8.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	2.62	.....	.....	.....	.....	.....	.....	.....	.....	\$3.23	\$0.61
No. 13.....	2.63	.....	.....	.....	.....	\$3.96	\$1.33	\$3.40	\$0.77	3.93	1.30
No. 14.....	2.66	.....	.....	.....	.....	3.85	1.19	.....	.....	3.85	1.19
Minimum.....	2.23	.....	.....	4.00	1.77	3.85	1.19	3.40	.77	3.23	.61
Maximum.....	2.66	.....	.....	4.00	1.77	3.96	1.33	3.40	.77	3.93	1.30
Weighted average.....	2.59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Two companies only.² Three companies only.³ Weighted average.

TABLE 35.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of other grades of anthracite, by sizes, and by principal classes of business, for 4 of the 14 representative dealers shown in Table 33, September—December, 1916.

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

FRANKLIN STOVE COAL.

Company.	September.							
	Cost price.	Household.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²
		Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.
No. 7.....	\$6.66	\$9.19	\$2.53	.....	.....	\$8.25	\$1.59	.....
No. 8.....	6.29	9.50	3.21	.....	.....	8.42	2.13	.....
No. 12.....	7.09	.....	.....	.....	.....	.....	.....	\$8.87
No. 13.....	6.47	.....	.....	\$9.06	\$2.59	³ 8.20	1.73	9.01
Minimum.....	6.29	9.19	2.53	9.06	2.59	8.20	1.59	8.87
Maximum.....	7.09	9.50	3.21	9.06	2.59	8.42	2.13	9.01
Weighted average.....	6.53	.....	.....	.....	.....	.....	.....	2.54

Company.	October.							
	Cost price.	Household.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²
		Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.
No. 7.....	\$6.66	\$9.75	\$3.09	.....	.....	\$8.25	\$1.59	.....
No. 8.....	6.29	9.44	3.15	.....	.....	8.61	2.32	.....
No. 12.....	7.09	.....	.....	.....	.....	.....	.....	\$9.07
No. 13.....	6.60	.....	.....	\$9.28	\$2.68	³ 8.34	1.74	9.20
Minimum.....	6.29	9.44	3.09	9.28	2.68	8.25	1.59	9.07
Maximum.....	7.09	9.75	3.15	9.28	2.68	8.61	2.32	9.20
Weighted average.....	6.56	.....	.....	.....	.....	.....	.....	2.60

¹ One company only.

² Two companies only.

³ Weighted average.

TABLE 35.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of other grades of anthracite, by sizes, and by principal classes of business, for 4 of the 14 representative dealers shown in Table 33, September—December, 1916—Continued.

FRANKLIN STOVE COAL—Continued.

Company.	November.								
	Cost price.	Household.		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 7.....	\$6.66	\$11.42	\$4.76	.....	.....	\$10.25	\$3.96	.....	.....
No. 8.....	6.29	10.75	4.46	.....	.....	.....	.....	.....	.....
No. 12.....	6.90	.....	.....	.....	.....	.....	.....	\$9.24	\$2.34
No. 13.....	6.60	.....	.....	\$10.39	\$3.79	³ 9.80	3.20	10.34	3.74
Minimum.....	6.29	10.75	4.46	10.39	3.79	9.80	3.20	9.24	2.34
Maximum.....	6.90	11.42	4.76	10.39	3.79	10.25	3.96	10.34	3.74
Weighted average.....	6.56	.....	.....	.....	.....	.....	.....	.....	.....

Company.	December.								
	Cost price.	Household		Weighted average of delivered business. ¹		Yard.		Weighted average of all business. ²	
		Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.	Gross margin.
No. 7.....	\$6.66	\$12.00	\$5.34	.....	.....	.....	.....	.....	.....
No. 8.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 12.....	6.90	.....	.....	.....	.....	.....	.....	\$9.84	\$2.94
No. 13.....	8.12	.....	.....	\$10.93	\$2.81	³ 9.68	\$1.56	10.83	2.71
Minimum.....	6.66	12.00	5.34	10.93	2.81	9.68	1.56	9.84	2.71
Maximum.....	8.12	12.00	5.34	10.93	2.81	9.68	1.56	10.83	2.94
Weighted average.....	7.92	.....	.....	.....	.....	.....	.....	.....	.....

¹ One company only.² Two companies only.³ Weighted average.

LEHIGH BROKEN COAL.

[illegible]

TABLE 35.—*Boston*——Retailers' cost prices, typical and weighted average sale prices, and gross margins per net ton of other grades of anthracite, by sizes, and by principal classes of business, for 4 of the 14 representative dealers shown in Table 33, September—December, 1916—Continued.

LEHIGH EGG COAL.

Company.	September.							
	Cost price.	Household.		Weighted average of delivered business.		Yard.		Weighted average of all business.
		Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.
No. 13.....	\$5.52	.....	.....	\$7.36	\$1.84	\$6.40	\$0.88	\$7.35
Minimum.....	5.52	.....	.....	7.36	1.84	6.40	.88	7.35
Maximum.....	5.52	.....	.....	7.36	1.84	6.40	.88	7.35
Weighted average.....	5.52	.....	.....	.....	.....	.....	.....	.....

Company.	October.							
	Cost price.	Household.		Weighted average of delivered business.		Yard.		Weighted average of all business.
		Typical sale price.	Gross margin.	Sale price.	Gross margin.	Typical sale price.	Gross margin.	Sale price.
No. 13.....	\$5.45	.....	.....	\$7.50	\$2.05	.....	.....	\$7.50
Minimum.....	5.45	.....	.....	7.50	2.05	.....	.....	7.50
Maximum.....	5.45	.....	.....	7.50	2.05	.....	.....	7.50
Weighted average.....	5.45	.....	.....	.....	.....	.....	.....	.....

¹ Weighted average.

SOUTHEASTERN MASSACHUSETTS AND RHODE ISLAND.

A brief discussion of conditions in various markets of southeastern Massachusetts and Rhode Island is here given. Following the discussion are specific tables showing purchase cost of anthracite, typical sales prices, and margins for the retail dealers investigated in these markets.

It will be observed from these tables that excessive increases in gross margins were realized by many dealers investigated in this territory. Company No. 2 made gross margins of \$6.13 per net ton on broken, \$5.23 on egg, \$5.13 on stove, and \$5.36 on nut for December household sales. Company No. 3 made in November and December gross margins of \$6.13 on broken, \$5.46 on egg, \$5.84 on stove, \$5.60 on nut, and \$3.54 on pea coal in the household trade.

Brockton, Mass.—Dealers of Brockton, Avon, and Campello secure their supply from various sources, some buying almost altogether from railroad coal companies, while others generally purchase from jobbers. Coal comes in two ways: Direct from the mines by rail, or by barge to New Bedford, Providence, or Fall River, and by rail inland. The larger tonnage comes all-rail.

Dealers of Brockton pick the slate from their anthracite coal before delivery. Owing to the poor quality of much of the coal received in the fall of 1916, it was said that this practice in some cases reduced the gross tons purchased to an equal number of net tons delivered.

Fall River, Mass.—This market is served by a number of dealers, most of whom purchase normally from some one or more railroad coal companies for shipment by water from New York. Shipment is made in both company and independent barges, but during the fall of 1916 there was a shortage of company coal and an even greater shortage of company barges. So great was the shortage that one dealer who usually secures company barges was obliged to charter independent bottoms for shipment of company coal.

This market is served by a number of dealers, most of whom purchase normally from some one or more railroad coal companies for shipment by water from New York. Shipment is made in both company and independent barges, but during the fall of 1916 there was a shortage of company coal and an even greater shortage of company barges. So great was the shortage that one dealer who usually secures company barges was obliged to charter independent bottoms for shipment of company coal.

In the past it has been customary for Fall River prices to follow those of Providence quite closely, but in the fall of 1916 prices were from \$1 to \$1.50 per net ton less in Fall River than in Providence. This seems to have been due to the fact that the larger dealers of Fall River purchased little premium coal, and were therefore able to make larger profits than usual without following Providence prices to their highest point. At the same time the smaller dealers, who in normal times underbid the larger firms for tonnage, were obliged to purchase practically all of their coal from premium sources.

Thus the shortage of railroad company coal and the position of the larger dealers as favored customers of the big companies made

it possible for the larger dealers of Fall River to make greater profits than usual and at the same time put their smaller competitors in a difficult position.

The operation of a yard under the management of the former owner was also resorted to by a Fall River firm as a means of holding custom which it was feared would be lost if it became generally known that the yard had changed ownership.

The location of retail yards along the water front makes it necessary to haul all coal up hill in delivering, as the whole city is built on a rather steep bluff. This makes 3,000 to 5,000 pounds the maximum load for team delivery as compared with 5,000 to 9,000 pounds on level city streets. This physical difficulty adds to costs of delivery and is emphasized by Fall River dealers as an important item in their cost of merchandising.

Taunton, Mass.—Taunton, a city of 35,000 inhabitants, presents the rather unusual feature of being served by three dealers prior to the period of high prices and by two dealers during the latter part of the year 1916. Prices for domestic sizes of anthracite in Taunton during the panic period were about \$1.50 per ton less than in Fall River and about \$3 less than in Providence. These differences are explained by the fact that the dominant factor in the market was getting practically all of its supply from a railroad coal company at circular prices and sold its coal at prices which netted profits larger than during the year before, but which meant loss to competing firms on anthracite bought at premium prices. One of the two competitors of this firm was entirely dependent for its supply on premium coal purchased from an independent jobber of New York City. This firm, finding itself unable to sell at a profit in the Taunton market, withdrew early in the fall. The other competing firm usually purchased its supply from three railroad coal companies, but during October, November, and December was unable either to secure deliveries from these sources on orders already accepted or to place new orders. Consequently, this firm was forced to turn to independent jobbers for its supply at premium prices. This premium coal was sold at Taunton prices, which frequently were less than the cost of the coal f. o. b. cars at Taunton.

Taunton presents a concrete example of the injustice to other dealers arising out of an inequitable distribution of railroad company coal, under which a favored customer, who is also the dominant factor in the market, is able to secure his full supply at circular prices in a time of shortage, while his competitors are obliged to depend on independent coal purchased through speculating jobbers.

Providence, R. I.—Practically all anthracite coal sold in Providence comes by barge from New York City and is discharged direct from the barges to the yards of the dealers. Some dealers handle railroad company coal almost exclusively, while others buy in the open market from any available source. During the fall of 1916 there was a general shortage of big company coal. Orders given in September, 1916, were in some cases still undelivered in January, 1917. One firm at least refused to buy premium coal or to raise its prices during the panic, and consequently this firm was out of coal and virtually out of business during part of the fall. Others firms purchased a great deal of premium coal and prices for the market

were made by these firms. Such prices naturally meant inordinately large profits to firms that purchased little or not premium coal.

Bristol and Warren, R. I.—A single company is the controlling factor in both of these small markets. This company has no competition in Warren and only one competitor in Bristol.

Both of the companies operating in these two towns experienced difficulty in securing their normal supply of company coal, but neither purchased any appreciable amount of premium coal prior to January 1, 1917. Both paid considerable demurrage charges on barges owing to slow delivery of coal at New York.

Bristol and Warren prices were the same as those of Fall River throughout the panic period.

TABLES SHOWING RETAIL GROSS MARGINS.

Tables 36 to 39, prepared on the same general basis as the Boston tables, give the same information for these markets, but are slightly different in form. The average cost price for each size of coal is given for each month, but instead of giving a single sale price for each month in each class of trade, three separate sales prices are given in brace, being the typical sales prices for the periods about the 5th, 15th, and 25th of each month.

OTHER NEW ENGLAND MARKETS.

Tables 40 to 45 give the same information for a number of representative dealers in other parts of New England. These tables are of the same general character as those for Boston and for southeastern Massachusetts and Rhode Island.

It will be observed that gross margins increased roughly from 75 cents to \$1 in the territory from Portland, Me., to Lawrence, Mass., in the cases of a number of the dealers covered. In central Massachusetts and Connecticut the increases in gross margin were not so high, ranging generally about 30 to 60 cents above normal.

TABLE 36.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass.; and Barrington, Bristol, Providence, and Warren, R. I.). Summary for 9 representative retailers showing the minimum and maximum of cost prices, of typical sale prices and of gross margins for principal classes of business, and weighted average cost prices of white ash anthracite, per net ton, by sizes, September-December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 153.]

[See Table 37 for detail by companies.]

1916	Broken.			Egg.			Stove.			Chestnut.			Pea.			Buckwheat.			Screenings.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
September:																					
Cost price.....	\$1.87	\$5.24	\$5.06	\$5.31	\$6.25	\$5.48	\$5.16	\$6.47	\$5.74	\$5.40	\$6.52	\$5.67	\$3.70	\$4.46	\$3.88	\$2.59	\$2.73	\$2.68			
Typical household sale price.....	7.66	8.25		8.02	8.75		8.42	9.00		8.33	9.25		6.50	7.00		3.21	3.44				
Gross margin.....	2.43	3.38		2.37	3.19		2.40	3.59		2.34	3.35		2.43	3.30		3.62	3.71				
Typical yard sale price.....				7.64	7.64		7.84	7.84		7.70	7.70		5.79	5.79		3.32	3.12				
Gross margin.....				2.03	2.03		1.97	1.97		1.53	1.53		1.72	1.72		.39	.39				
October:																					
Cost price.....	4.87	5.35	5.11	5.44	6.58	5.72	5.16	6.73	6.02	5.40	6.73	6.09	3.90	4.46	3.99	2.59	2.73	2.64			
Typical household sale price.....	7.55	9.25		8.00	10.00		8.42	10.25		8.33	10.50		6.33	8.00		3.31	3.47				
Gross margin.....	2.20	4.38		1.93	4.06		1.77	4.59		1.60	4.35		1.98	4.10		.72	.74				
Typical yard sale price.....				7.52	7.82		8.01	8.01		8.08	8.08		5.97	5.97		3.13	3.13				
Gross margin.....				2.17	2.17		2.12	2.12		1.89	1.89		1.58	1.58		.40	.40				
November:																					
Cost price.....	4.87	5.35	5.19	5.45	7.15	6.30	5.16	7.52	6.65	5.40	9.55	6.98	3.90	5.13	4.26	2.73	2.73	2.73	2.31	2.31	\$2.31
Typical household sale price.....	7.60	11.00		8.34	11.50		8.33	12.00		8.42	12.00		7.25	10.00		3.44	3.44		2.14	2.14	
Gross margin.....	2.25	6.13		1.35	6.05		.81	6.42		1.16	5.60		2.92	5.10		.71	.71		1.17	1.17	
Typical yard sale price.....				8.81	8.81		8.88	8.88		10.05	10.05		6.76	6.76		3.13	3.13		1.68	1.68	
Gross margin.....				3.16	3.16		2.99	2.99		3.81	3.81		2.36	2.36		.40	.40		.37	.37	
December:																					
Cost price.....	4.87	5.35	5.19	5.45	6.77	6.17	5.16	7.07	6.32	5.40	9.55	6.84	3.90	6.68	4.27	2.73	2.73	2.73	2.30	2.30	2.30
Typical household sale price.....	7.36	11.00		8.13	12.00		9.50	12.00		9.32	12.00		7.00	10.00		3.48	3.48		2.20	2.20	
Gross margin.....	2.01	6.13		1.36	6.05		2.50	6.41		1.95	5.60		2.67	5.10		.75	.75		1.10	1.10	
Typical yard sale price.....				9.29	9.29		9.35	9.35		10.28	10.28		7.75	7.75		3.13	3.13		1.10	1.10	
Gross margin.....				3.56	3.56		3.46	3.46		4.04	4.04		3.36	3.36		.40	.40				

¹ Loss.

TABLE 37.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass.; and Barrington, Bristol, Providence and Warren, R. I.). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite by sizes, and by principal classes of business, for 9 representative dealers, September—December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 153.]

[Wherever in this table 3 prices are shown, they represent prices around the 5th, 15th, and 25th of the month.]

[See Table 36 for summary of this table.]

BROKEN.

	September.						October.						November.						December.					
	Household.			Yard.			Household.			Yard.			Household.			Yard.			Household.			Yard.		
	Cost price.	Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.	Cost price.	Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.	Cost price.	Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.	Cost price.	Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.	Cost price.	Sale price.	Gross mar- gin.	
Company No. 1.	\$5.23	\$7.66	\$2.43				\$3.52	\$3.29				\$8.85	\$3.62				\$7.46	\$2.23						
		7.66	2.43		8.52	3.29		8.85	3.62		7.46	2.23												
		8.25	3.38		8.25	3.38		11.00	6.13		11.00	6.13												
Company No. 2.	4.87	8.25	3.38				8.25	3.38				11.00	6.13				11.00	6.13						
		8.25	3.38		8.25	3.38		9.25	4.38		9.25	4.38		11.00	6.13		11.00	6.13						
		8.25	3.38		8.25	3.38		9.25	4.38		9.25	4.38		11.00	6.13		11.00	6.13						
Company No. 3.	4.87	8.25	3.38				8.25	3.38				9.25	4.38				11.00	6.13						
		8.25	3.38		8.25	3.38		9.25	4.38		9.25	4.38		11.00	6.13		11.00	6.13						
		8.25	3.38		8.25	3.38		9.25	4.38		9.25	4.38		11.00	6.13		11.00	6.13						
Company No. 6.	5.24	7.87	2.63				7.55	2.20				7.60	2.25				7.36	2.01						
		7.87	2.63		7.55	2.20		7.55	2.20		7.60	2.25		7.36	2.01		7.36	2.01						
		7.66	2.43		7.55	2.20		7.55	2.20		7.60	2.25		7.36	2.01		7.36	2.01						
Minimum.	4.87	7.66	2.43				7.55	2.20				7.60	2.25				7.36	2.01						
Maximum.	5.24	8.25	3.38				9.25	4.38				11.00	6.13				11.00	6.13						
Weighted average.	5.06																							

EGG.

Company No. 1.....	\$5.61	\$8.07	\$2.46	\$7.64	\$2.03	\$5.65	\$8.41	\$2.76	\$7.82	\$2.17	\$5.65	\$8.91	\$3.26	\$8.81	\$3.16	\$5.73	\$9.35	\$3.62	\$9.29	\$3.56
Company No. 2.....	5.41	8.50	3.09	7.64	2.03	5.73	8.50	2.76	7.82	2.17	6.03	8.91	3.26	8.81	3.16	5.77	9.35	3.62	9.29	3.56
Company No. 3.....	5.39	8.50	3.11	7.64	2.03	5.49	8.50	3.01	7.82	2.17	5.54	11.00	4.97	8.81	3.16	5.54	11.00	5.23	9.29	3.56
Company No. 4.....	6.25	8.75	2.50	7.64	2.03	6.25	9.00	2.75	7.82	2.17	6.25	11.00	4.75	8.81	3.16	5.54	11.00	5.23	9.29	3.56
Company No. 6.....	5.59	8.25	2.66	7.64	2.03	5.67	8.07	2.40	7.82	2.17	5.70	8.34	2.64	8.32	2.60	5.72	8.32	2.60	9.29	3.56
Company No. 7.....	6.16	8.53	2.37	7.64	2.03	6.58	8.55	1.97	7.82	2.17	6.50	11.00	4.50	8.81	3.16	6.50	11.00	4.50	9.29	3.56
Company No. 8.....	5.36	8.02	2.66	7.64	2.03	6.07	8.00	1.93	7.82	2.17	7.15	8.83	2.68	8.13	1.36	6.77	12.00	5.23	9.29	3.56
Company No. 9.....	5.31	8.50	3.19	7.64	2.03	5.44	8.50	3.06	7.82	2.17	5.45	11.50	6.05	8.81	3.16	5.45	11.50	6.05	9.29	3.56
Minimum.....	5.31	8.02	2.37	7.64	2.03	5.44	8.00	1.93	7.82	2.17	5.45	8.34	1.35	8.81	3.16	5.45	8.13	1.36	9.29	3.56
Maximum.....	6.25	8.75	3.19	7.64	2.03	6.58	10.00	4.06	7.82	2.17	6.30	11.50	6.05	8.81	3.16	6.77	12.00	6.05	9.29	3.56
Weighted average.....	5.48					5.72														

TABLE 37.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass.; and Barrington, Bristol, Providence and Warren, R. I.). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 9 representative dealers, September—December, 1916—Continued.*

STOVE.

	September.					October.					November.					December.				
	Household.		Yard.		Cost price.	Household.		Yard.		Cost price.	Household.		Yard.		Cost price.	Household.		Yard.		Cost price.
	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	
Company No. 1.....	\$8.56	\$2.69	\$7.84	\$1.97	\$5.89	\$8.79	\$2.90	\$8.01	\$2.12	\$5.89	\$9.55	\$3.65	\$8.88	\$2.99	\$5.89	\$10.29	\$4.40	\$9.35	\$3.46	
	8.56	2.69	7.84	1.97		8.79	2.90	8.01	2.12		9.55	3.65	8.88	2.99		10.29	4.40	9.35	3.46	
Company No. 2.....	8.75	2.88			5.87	8.75	2.88			5.87	11.00	5.13			5.87	11.00	5.13			
	8.75	2.88				8.75	2.88				11.00	5.13				11.00	5.13			
Company No. 3.....	8.75	3.59			5.16	8.75	3.59			5.16	10.38	5.22			5.16	11.00	5.84			
	8.75	3.59				8.75	3.59				10.38	5.22				11.00	5.84			
Company No. 4.....	9.00	2.53			6.47	9.25	2.52			6.71	11.25	4.54			6.71	12.00	5.29			
	9.00	2.53				9.25	2.52				11.25	4.54				12.00	5.29			
Company No. 5.....	8.71	2.67			6.04	8.88	2.86			6.02	12.00	5.29			6.02	12.00	5.29			
	8.71	2.67				8.88	2.86				12.00	5.29				12.00	5.29			
Company No. 6.....	8.71	2.67			6.38	8.80	2.40			6.40	12.00	4.73			6.38	12.00	4.93			
	8.71	2.67				8.80	2.40				12.00	4.73				12.00	4.93			
Company No. 7.....	8.78	2.40				9.75	3.35			7.27	12.00	4.73			7.07	12.00	4.93			
	8.78	2.40				9.75	3.35				12.00	4.73				12.00	4.93			
Company No. 8.....	8.44	2.88			5.56	8.50	1.85			6.65	8.33	.81			7.00	9.50	2.50			
	8.44	2.88				8.50	1.85				8.33	.81				9.50	2.50			
Company No. 9.....	8.42	2.86			5.44	8.58	1.93			5.58	9.26	1.74			5.59	9.67	2.67			
	8.42	2.86				8.58	1.93				9.26	1.74				9.67	2.67			
Company No. 10.....	8.75	3.31				8.75	3.22			5.53	12.00	6.42				12.00	6.41			
	8.75	3.31				8.75	3.22				12.00	6.42				12.00	6.41			
Minimum.....	8.42	2.40			5.16	8.42	1.77			5.16	8.33	.81			5.16	9.50	2.50			3.46
Maximum.....	9.00	3.59			6.47	10.25	4.59			6.73	12.00	6.42			7.07	12.00	6.41			3.46
Weighted average.....	5.74				6.02						6.55				6.52					

CHESTNUT.

Company No. 1.....	\$6.17	\$8.65	\$2.48	\$7.70	\$1.53	\$6.19	\$8.93	\$2.74	\$8.08	\$1.89	\$9.69	\$3.45	\$10.05	\$3.81	\$6.24	\$9.93	\$3.69	\$10.28	\$4.04
		8.65	2.48	7.70	1.53		8.93	2.74	8.08	1.89	9.69	3.45	10.05	3.81		9.93	3.69	10.28	4.04
Company No. 2.....	5.70	8.75	3.05			5.70	8.75	3.05			11.00	5.30			5.61	11.00	5.36		
		8.75	3.05				8.75	3.05			11.00	5.30				11.00	5.36		
Company No. 3.....	5.40	8.75	3.35			5.40	8.75	3.35			11.00	5.60				11.00	5.60		
		8.75	3.35				8.75	3.35			11.00	5.60			5.40	11.00	5.60		
Company No. 4.....											11.50	1.95			9.55	11.50	1.95		
											12.00	2.45				11.50	1.95		
Company No. 5.....	6.52	9.25	2.73			6.54	9.50	2.96			11.50	4.96			6.54	11.50	4.96		
		9.25	2.73				10.50	3.96			11.50	4.96				11.50	4.96		
Company No. 6.....	5.74	8.64	2.90			5.92	8.89	2.97			9.31	3.33			5.98	9.50	3.52		
		8.64	2.90				8.89	2.97			9.31	3.33				9.50	3.52		
Company No. 7.....	6.47	8.81	2.34			6.68	8.83	2.15			12.00	4.00			8.00	12.00	4.00		
		8.81	2.34				9.75	3.07			12.00	4.00				12.00	4.00		
Company No. 8.....	5.57	8.50	2.93			6.73	8.42	1.69			8.42	1.16			7.11	10.75	3.64		
		8.58	3.01				8.33	1.60			9.67	2.41				9.32	3.21		
Company No. 9.....	5.47	8.75	3.28			5.60	8.75	3.15			12.00	5.28			6.72	12.00	5.28		
		8.75	3.28				8.75	3.15			12.00	5.28				12.00	5.28		
Minimum.....	5.40	8.33	1.34			5.40	8.33	1.60			12.00	5.28			5.40	12.00	5.28		
Maximum.....	6.52	9.25	3.35			6.73	10.50	4.35			12.00	5.28			5.40	12.00	5.28		
Weighted average.....	5.67					6.09									6.84				

BUCKWHEAT.

Company No. 1.....	\$2.73	{ \$3.44 3.44 3.44 }	\$0.71	\$3.12	\$0.39	{ \$2.73 2.73 2.73 }	{ \$3.47 3.47 3.47 }	\$0.74	\$3.13	\$0.40	{ \$2.73 2.73 2.73 }	{ \$3.44 3.44 3.44 }	\$0.71	\$3.13	\$0.40	{ \$2.73 2.73 2.73 }	{ \$3.48 3.48 3.48 }	\$0.75	\$3.13	\$0.40
Company No. 6.....	2.59	{ 3.21 3.21 3.21 }	.62	3.12	.39	2.59	{ 3.31 3.31 3.31 }	.72	3.13	.40			.71	3.13	.40					
Minimum.....	2.59	3.21	.62	3.12	.39	2.59	3.31	.72	3.13	.40	2.73	3.44	.71	3.13	.40	2.73	3.48	.75	3.13	.40
Maximum.....	2.73	3.44	.71	3.12	.39	2.73	3.47	.74	3.13	.40	2.73	3.44	.71	3.13	.40	2.73	3.48	.75	3.13	.40
Weighted average.....	2.68					2.64					2.73					2.73				

SCREENINGS.

Company No. 1 ¹						\$2.31	{ \$2.14 2.14 2.14 }	2.17	\$2.68	\$0.37	{ \$2.30 2.30 2.30 }	{ \$2.20 2.20 2.20 }	2.10	\$0.10						
Minimum.....						2.31	2.14	2.17	2.68	.37	2.30	2.20	2.10							
Maximum.....						2.31	2.14	2.17	2.68	.37	2.30	2.20	2.10							
Weighted average.....						2.31	2.14	2.17	2.68	.37	2.30	2.20	2.10							

¹ Only company for which figures are available.² Loss.

TABLE 38.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass.; and Barrington, Bristol, Providence, and Warren, R. I.). Summary for 6 of the 9 representative retailers shown in Table 36, showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and weighted average cost prices of other grades of anthracite, per net ton, by sizes, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 153.]

[See Table 39 for detail by companies.]

	Lehigh broken.			Lehigh egg.			Lehigh stove.			Lehigh chestnut.			Lehigh pea.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
<i>September, 1916.</i>															
Cost price.....	\$5.89	\$5.89	\$5.89	\$4.73	\$6.26	\$5.73	\$4.73	\$6.59	\$6.39	\$6.52	\$6.52	\$6.52	\$5.09	\$5.09	\$5.09
Typical household sale price.....	8.60	8.60	.....	9.00	9.00	.....	9.00	9.25	.....	9.50	9.50	.....	7.50	7.50	.....
Gross margin.....	2.71	2.71	.....	2.74	4.27	.....	2.66	4.27	.....	2.98	2.98	.....	2.41	2.41	.....
<i>October, 1916.</i>															
Cost price.....	5.89	5.89	5.89	4.73	6.31	5.94	4.73	6.59	6.36	6.52	6.52	6.52	5.09	5.09	5.09
Typical household sale price.....	8.85	9.85	.....	9.00	10.25	.....	9.00	10.50	.....	9.75	10.75	.....	7.75	8.75	.....
Gross margin.....	2.96	3.96	.....	2.94	5.27	.....	2.91	5.27	.....	3.23	4.23	.....	2.66	3.66	.....
<i>November, 1916.</i>															
Cost price.....	5.89	5.89	5.89	4.73	6.33	5.76	4.73	6.59	6.44	6.52	6.52	6.52	5.09	5.09	5.09
Typical household sale price.....	10.85	10.85	.....	11.25	11.50	.....	11.50	11.80	.....	11.75	11.75	.....	9.75	9.75	.....
Gross margin.....	4.96	4.96	.....	4.92	6.77	.....	4.91	6.77	.....	5.23	5.23	.....	4.66	4.66	.....
<i>December, 1916.</i>															
Cost price.....	.....	.....	.....	6.35	9.04	6.54	6.61	9.07	6.77	6.52	6.52	6.52	5.09	5.09	5.09
Typical household sale price.....	.....	.....	.....	11.25	11.50	.....	11.50	11.80	.....	11.75	11.75	.....	9.75	9.75	.....
Gross margin.....	.....	.....	.....	2.46	4.90	.....	2.43	4.89	.....	5.23	5.23	.....	4.66	4.66	.....

	Franklin broken.			Franklin egg.			Franklin stove.			Franklin chestnut.			Shamokin pea.			Shamokin stove.			Shamokin chestnut.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
<i>September, 1916.</i>																					
Cost price.....	\$5.77	\$7.14	\$6.03	\$5.89	\$7.78	\$6.54	\$6.18	\$7.73	\$6.82	\$5.36	\$6.79	\$6.16	\$4.46	\$4.68	\$4.64	\$5.36	\$6.79	\$5.77	\$6.44	\$6.44	\$6.44
Typical household sale price.....	9.41	10.25		9.65	10.50		9.90	10.75		9.69	10.75		7.40	7.75		9.75	9.75		9.75	9.75	9.75
Gross margin.....	3.11	3.83		1.97	3.82		2.27	3.82		3.07	4.39		2.72	3.29		2.96	4.39		3.31	3.31	3.31
Typical yard sale price.....	8.66	8.66		8.75	8.75		8.73	8.73		8.06	8.06		6.44	6.44							
Gross margin.....	2.58	2.58		2.66	2.66		2.07	2.07		1.44	1.44		1.76	1.76							
<i>October, 1916.</i>																					
Cost price.....	5.77	7.14	6.13	5.89	7.25	6.50	6.20	7.26	6.86	5.36	6.79	6.23	4.46	4.68	4.63	5.36	6.79	6.30	6.44	6.44	6.44
Typical household sale price.....	9.50	11.50		9.75	11.75		9.83	12.00		9.75	12.00		7.75	8.12		10.00	11.00		10.00	11.00	11.00
Gross margin.....	3.36	4.94		2.50	4.96		2.76	4.88		3.33	5.21		3.16	3.47		3.21	5.64		3.56	4.56	
Typical yard sale price.....	9.05	9.05		9.36	9.36		9.12	9.12		8.89	8.89		6.86	6.86							
Gross margin.....	2.87	2.87		3.20	3.20		2.27	2.27		2.27	2.27		2.18	2.18							
<i>November, 1916.</i>																					
Cost price.....	5.77	7.14	6.31	5.89	7.14	6.60	6.22	7.26	6.90	5.36	6.79	6.26	4.46	4.68	4.64	5.36	6.83	6.46	6.44	6.44	6.44
Typical household sale price.....	9.50	12.50		9.75	12.75		10.00	13.00		9.75	13.00		7.75	9.00		12.00	12.00		12.00	12.00	12.00
Gross margin.....	3.33	5.94		2.83	5.96		2.76	5.85		4.39	6.64		3.29	4.54		5.17	6.64		5.56	5.56	
Typical yard sale price.....	11.42	11.42		11.29	11.29		10.67	10.67		9.83	9.83		7.10	7.10							
Gross margin.....	5.12	5.12		4.76	4.76		3.65	3.65		3.21	3.21		2.42	2.42							
<i>December, 1916.</i>																					
Cost price.....	5.77	7.14	6.37	5.89	7.32	6.96	6.27	7.26	6.59	5.36	6.79	6.30	4.46	4.68	4.64	5.63	6.83	6.50	6.44	6.44	6.44
Typical household sale price.....	10.39	12.50		10.36	12.75		10.71	13.00		11.21	13.00		9.00	9.33		12.00	12.00		12.00	12.00	12.00
Gross margin.....	4.62	5.94		3.47	5.96		4.44	5.80		4.67	6.64		4.33	4.68		5.17	6.37		5.56	5.56	
Typical yard sale price.....										11.52	11.52		8.36	8.36							
Gross margin.....							4.90	4.90		4.90	4.90		3.68	3.68							

TABLE 39.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass.; and Barrington, Bristol, Providence, and Warren, R. I.). Retailers' cost prices, typical sale prices, and gross margins per net ton of other grades of anthracite, by sizes, and by principal classes of business, for 6 of the 9 representative dealers shown in Table 37, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[Wherever in this table three prices are shown they represent prices around the 5th, 15th, and 25th of the month.]

[See Table 38 for summary of this table.]

LEHIGH BROKEN.

	September.			October.			November.			December.		
	Cost price.	Household.		Cost price.	Household.		Cost price.	Household.		Cost price.	Household.	
		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.
Company No. 4.....	\$5.89	{ \$8.60 8.60	{ \$2.71 2.71	{ \$5.89 5.89	{ \$8.85 8.85 9.85	{ \$2.96 2.96 3.96	{ \$5.89 5.89	{ \$10.85 10.85 10.85	{ \$4.96 4.96 4.96			
Minimum.....	5.89	8.60	2.71	5.89	8.85	2.96	5.89	10.85	4.96			
Maximum.....	5.89	8.60	2.71	5.89	9.85	3.96	5.89	10.85	4.96			
Weighted average.....	5.89	.....	.....	5.89	.....	.....	5.89	.....	.....	

LEHIGH EGG.

Company No. 2.....	\$4.73	{ \$9.00 9.00 9.00	{ \$4.27 4.27 4.27	{ \$4.73 4.73	{ \$9.00 9.00 10.00	{ \$4.27 4.27 5.27	{ \$4.73 4.73	{ \$11.50 11.50 11.50	{ \$6.77 6.77 6.77	{ \$9.04 9.04	{ \$11.50 11.50 11.50	{ \$2.46 2.46 2.46
Company No. 4.....	6.26	{ 9.00 9.00 9.00	{ 2.74 2.74 2.74	{ 6.26 6.26	{ 9.25 9.25 10.25	{ 2.99 2.99 3.99	{ 6.26 6.26	{ 11.25 11.25 11.25	{ 4.99 4.99 4.99	{ 6.57 6.57	{ 11.25 11.25 11.25	{ 4.68 4.68 4.68
Company No. 5.....	6.26	{ 9.00 9.00 9.00	{ 2.74 2.74 2.74	{ 6.31 6.31	{ 9.25 9.25 10.25	{ 2.94 2.94 3.94	{ 6.33 6.33	{ 11.25 11.25 11.25	{ 4.92 4.92 4.92	{ 6.35 6.35	{ 11.25 11.25 11.25	{ 4.90 4.90 4.90
Minimum.....	4.73	9.00	2.74	4.73	9.00	2.94	4.73	11.25	4.92	6.35	11.25	2.46
Maximum.....	6.26	9.00	4.27	6.31	10.25	5.27	6.33	11.50	6.77	9.04	11.50	4.90
Weighted average.....	5.73	.....	.....	5.94	.....	.....	5.76	.....	.....	6.54	.....	.....

LEHIGH STOVE.

Company No. 2.....	\$4.73	{ \$9.00 9.00 9.00 4.27 4.27 4.27	\$4.27	{ \$4.73 9.00 10.00 5.27	\$9.00	\$4.27	{ \$11.50 11.50 11.50 6.77	\$6.77	{ \$9.07 11.50 11.50 6.61	{ \$11.50 11.50 11.50 6.77	\$2.43 2.43 2.43 4.89 4.89 4.89
Company No. 4.....	6.59	{ 9.25 9.25 9.25 2.66 2.66 2.66	2.66	{ 6.59 9.50 10.50 3.91	10.50	3.91	{ 6.59 11.50 11.50 4.91	6.59	{ 6.61 11.50 11.50 4.89	{ 11.50 11.50 11.50 4.89	4.89
Minimum.....	4.73	9.00	2.66	4.73	9.00	2.91	4.73	4.73	6.61	11.50	2.43
Maximum.....	6.59	9.25	4.27	6.59	10.50	5.27	6.59	6.77	9.07	11.50	4.89
Weighted average.....	6.39	.....	.....	6.36	.....	.....	6.44	.....	6.77	.....	.....

LEHIGH CHESTNUT.

Company No. 4.....	\$6.52	{ \$9.50 9.50 9.50 2.98 2.98	\$2.98	{ \$6.52 9.75 10.75 3.23	\$9.75	\$3.23	{ \$11.75 11.75 11.75 5.23	\$5.23	{ \$6.52 11.75 11.75 5.23	{ \$11.75 11.75 11.75 5.23	\$5.23 5.23 5.23 5.23
Minimum.....	6.52	9.50	2.98	6.52	9.75	3.23	6.52	5.23	6.52	11.75	5.23
Maximum.....	6.52	9.50	2.98	6.52	10.75	4.23	6.52	5.23	6.52	11.75	5.23
Weighted average.....	6.52	.....	.....	6.52	.....	.....	6.52	.....	6.52	.....	.....

LEHIGH PEA.

Company No. 4.....	\$5.09	{ \$7.50 7.50 7.50 2.41 2.41	\$2.41	{ \$5.09 7.75 8.75 2.66	\$7.75	\$2.66	{ \$9.75 9.75 9.75 4.66	\$4.66	{ \$5.09 9.75 9.75 4.66	{ \$9.75 9.75 9.75 4.66	\$4.66 4.66 4.66 4.66
Minimum.....	5.09	7.50	2.41	5.09	7.75	2.66	5.09	4.66	5.09	9.75	4.66
Maximum.....	5.09	7.50	2.41	5.09	8.75	3.66	5.09	4.66	5.09	9.75	4.66
Weighted average.....	5.09	.....	.....	5.09	.....	.....	5.09	.....	5.09	.....	.....

TABLE 39.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass.; and Barrington, Bristol, Providence, and Warren, R. I.). Retailers' cost prices, typical sale prices, and gross margins per net ton of other grades of anthracite, by sizes, and by principal classes of business, for 6 of the 9 representative dealers shown in Table 37, September — December, 1916—Continued.*

FRANKLIN BROKEN.

	September.				October.				November.				December.			
	Household.		Yard.		Household.		Yard.		Household.		Yard.		Household.		Yard.	
	Cost price.	Sale price.	Gross margin.	Gross margin.	Cost price.	Sale price.	Gross margin.	Gross margin.	Cost price.	Sale price.	Gross margin.	Gross margin.	Cost price.	Sale price.	Gross margin.	Gross margin.
Company No. 1.....		\$9.41	\$3.33	\$8.66	\$2.58	\$9.09	\$3.51	\$2.87	\$6.30	\$10.02	\$4.32	\$5.12				
	\$6.08	9.41	3.33	9.41	3.33	9.09	3.51	2.87	6.30	10.02	4.32	5.12				
Company No. 2.....		9.50	3.55			9.50	3.37		6.34	12.00	5.66		\$5.59			
	5.95	9.50	3.55		6.13	9.50	3.37		6.34	12.00	5.66		12.00			
Company No. 3.....		9.50	3.55			10.50	4.37		6.17	9.50	5.66		12.00			
	5.95	9.50	3.55		5.95	9.50	3.55		6.17	9.50	5.66		12.00			
Company No. 4.....		10.25	3.11			9.50	3.36		7.14	12.00	5.83		12.00			
	7.14	10.25	3.11		7.14	10.50	3.36		7.14	12.00	5.83		12.00			
Company No. 5.....		10.25	3.82			11.50	4.36			12.50	5.36		12.50			
	6.43	10.25	3.82		6.56	10.50	3.94		6.56	12.50	5.94		12.50			
Company No. 6.....		10.25	3.82			11.50	4.94			12.50	5.94		12.50			
	5.77	9.60	3.83		5.77	9.77	4.00		5.77	10.18	4.41		10.39			
Minimum.....	5.77	9.41	3.11	8.66	2.58	9.77	4.00		5.77	10.18	4.41		10.39			
Maximum.....	7.14	10.25	3.83	8.66	2.58	9.77	4.00		5.77	10.18	4.41		10.39			
Weighted average.....	6.03				6.13	11.30	4.94		6.31	12.50	5.94		12.30			

FRANKLIN EGG.

Company No. 1.....	\$6.09	\$9.65	\$3.56	\$8.75	\$2.66	\$6.16	\$9.78	\$3.62	\$9.36	\$3.20	\$6.53	\$10.82	\$4.29	\$11.29	\$4.76				
		9.65	3.56				9.78	3.62				10.82	4.29						
Company No. 2.....	6.41	9.75	3.34			6.44	9.75	3.31			6.48	12.00	5.52						
		9.75	3.34				9.75	3.31				12.00	5.52						
Company No. 3.....	7.78	9.75	1.97			7.25	9.75	2.50			6.92	9.75	5.08						
		9.75	1.97				9.75	2.50				12.00	5.08						
Company No. 4.....	7.14	10.50	3.36			7.14	10.75	3.61			7.14	12.75	5.61						
		10.50	3.36				11.75	4.61				12.75	5.61						
Company No. 5.....	6.75	10.50	3.75			6.79	10.75	3.96			6.79	12.75	5.96						
		10.50	3.75				11.75	4.96				12.75	5.96						
Company No. 6.....	5.89	9.71	3.82			5.89	9.91	4.02			5.89	10.55	4.66						
		9.71	3.82				9.91	4.02				10.55	4.66						
Minimum.....	5.89	9.65	1.97			5.89	9.75	2.50			5.89	9.75	2.83						
Maximum.....	7.78	10.50	3.82			7.25	11.75	4.96			7.14	12.75	5.96						
Weighted average.....	6.54					6.50					6.60								

FRANKLIN STOVE.

Company No. 1.....	\$6.66	\$9.90	\$3.24	\$8.73	\$2.07	\$6.85	\$10.18	\$3.33	\$9.12	\$2.27	\$7.02	\$11.23	\$4.21	\$10.67	\$3.65				
		9.90	3.24				10.18	3.33				11.23	4.21						
Company No. 2.....	6.75	10.00	3.25			6.81	10.00	3.19			6.89	12.00	5.11						
		10.00	3.25				11.00	4.19				12.00	5.11						
Company No. 3.....	7.73	10.00	2.27			7.24	10.00	2.76			7.24	10.00	2.76						
		10.00	2.27				10.00	2.76				12.00	4.76						
Company No. 4.....	7.26	10.75	3.49			7.26	11.00	3.74			7.26	13.00	5.74						
		10.75	3.49				12.00	4.74				13.00	5.74						
Company No. 5.....	7.12	10.75	3.63			7.12	11.00	3.88			7.15	13.00	5.85						
		10.75	3.63				12.00	4.88				13.00	5.85						
Company No. 6.....	6.18	10.00	3.82			6.20	9.83	3.63			6.22	10.71	4.49						
		10.00	3.82				9.83	3.63				10.71	4.49						
Minimum.....	6.18	9.90	2.27			6.20	9.83	2.76			6.22	10.00	2.86						
Maximum.....	7.73	10.75	3.82			7.26	12.00	4.88			7.26	13.00	5.85						
Weighted average.....	6.82					6.86					6.90								

TABLE 39.—*Southeastern Massachusetts and Rhode Island (Attleboro, Avon, Brockton, Fall River, and Taunton, Mass., and Barrington, Bristol, Providence, and Warren, R. I.). Retailers' cost prices, typical sale prices, and gross margins per net ton of other grades of anthracite, by sizes, and by principal classes of business, for 6 of the 9 representative dealers shown in Table 37, September—December, 1916—Continued.*

FRANKLIN CHESTNUT.

	September.				October.				November.				December.			
	Household.		Yard.		Household.		Yard.		Household.		Yard.		Household.		Yard.	
	Cost price.	Sale price.	Gross margin.		Cost price.	Sale price.	Gross margin.		Cost price.	Sale price.	Gross margin.		Cost price.	Sale price.	Gross margin.	
Company No. 1.....	\$6.62	\$9.69	3.07	\$8.06	\$1.44	\$6.62	\$9.95	3.33	\$8.89	\$2.27	\$11.01	4.42	\$6.62	\$11.29	4.67	\$4.90
		9.69	3.07			9.95	3.33				11.01	4.42		11.29	4.67	
Company No. 3.....	5.36	9.75	4.39			9.75	4.39				9.75	4.39	5.36	12.00	6.64	
		9.75	4.39			9.75	4.39				12.00	6.64		12.00	6.64	
Company No. 4.....	6.79	10.75	3.96			11.00	4.21		6.79	13.00	6.21		6.79	13.00	6.21	
		10.75	3.96			11.00	4.21			13.00	6.21			13.00	6.21	
Company No. 6.....	6.08	10.15	4.07			10.00	3.92		6.08	10.80	4.72		6.08	11.21	5.13	
		10.15	4.07			10.00	3.92			10.80	4.72			11.21	5.13	
Minimum.....	5.36	9.69	3.07	8.06	1.44	5.36	9.75	3.33	5.36	9.75	4.39	9.83	5.36	11.21	4.67	4.90
Maximum.....	6.79	10.75	4.39	8.06	1.44	6.79	12.00	5.21	6.79	13.00	6.61	9.83	6.79	13.00	6.64	4.90
Weighted average.....	6.16					6.23			6.26				6.30			

FRANKLIN PEA.

Company No. 1.....	\$4.68	\$7.40	\$2.72	\$6.44	\$1.76	\$4.68	\$7.84	\$3.16	\$6.86	\$2.18	\$4.68	{ \$8.53 8.53	\$3.85	\$7.10	\$2.42	\$4.68	{ \$9.01 9.01	\$4.33	\$8.36	\$3.68
		7.40	2.72				7.84	3.16				8.53	3.85				9.01	4.33		
Company No. 3.....	4.46	7.75	3.29			4.46	7.75	3.29				7.75	3.29			4.46	9.00	4.54		
		7.75	3.29				7.75	3.29				7.75	3.29				9.00	4.54		
Company No. 6.....	4.65	7.51	2.89			4.65	8.12	3.47				8.12	3.47			4.65	9.33	4.68		
		7.51	2.89				8.12	3.47				8.12	3.47				9.33	4.68		
Minimum.....	4.46	7.40	2.72		1.76	4.46	7.75	3.16	6.86	2.18	4.46	7.75	3.29	7.10	2.42	4.46	9.00	4.33	8.36	3.68
Maximum.....	4.68	7.75	3.29	6.44	1.76	4.68	8.12	3.47	6.86	2.18	4.68	9.00	4.54	7.10	2.42	4.68	9.33	4.68	8.36	3.68
Weighted average.....	4.64					4.63					4.64					4.64				

SHAMOKIN STOVE.

Company No. 4.....	\$6.79	\$9.75	\$2.96			\$6.79	\$10.00	\$3.21			\$6.83	{ \$12.00 12.00	\$5.17			\$6.83	{ \$12.00 12.00	\$5.17		
		9.75	2.96				10.00	3.21				12.00	5.17				12.00	5.17		
Company No. 5.....	5.36	9.75	4.39				11.00	4.21				12.00	6.64				12.00	6.37		
		9.75	4.39			5.36	10.00	4.64			5.36	12.00	6.64			5.63	12.00	6.37		
Minimum.....	5.36	9.75	2.96			5.36	11.00	5.61			5.36	12.00	5.17			5.63	12.00	5.17		
Maximum.....	6.79	9.75	4.39			6.79	11.00	5.64			6.83	12.00	6.64			6.83	12.00	6.37		
Weighted average.....	5.77					6.30					6.46					6.50				

SHAMOKIN CHESTNUT.

Company No. 4.....	\$6.44	\$9.75	\$3.31			\$6.44	\$10.00	\$3.56			\$6.44	{ \$12.00 12.00	\$5.56			\$6.44	{ \$12.00 12.00	\$5.56		
		9.75	3.31				10.00	3.56				12.00	5.56				12.00	5.56		
Minimum.....	6.44	9.75	3.31			6.44	11.00	4.56			6.44	12.00	5.56			6.44	12.00	5.56		
Maximum.....	6.44	9.75	3.31			6.44	11.00	4.56			6.44	12.00	5.56			6.44	12.00	5.56		
Weighted average.....	6.44					6.44					6.44					6.44				

TABLE 40.—*Maine, New Hampshire, and Northeastern Massachusetts (Portland, Me., Dover, Manchester, and Portsmouth, N. H., and Lawrence, Mass.). Summary for 5 representative retailers showing minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 41 for detail by companies.]

1916.	Broken.			Eggs.			Stove.			Chestnut.			Pea.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
SEPTEMBER.															
Cost price.....	\$6.11	\$6.11	\$6.11	\$5.45	\$7.21	\$6.14	\$5.67	\$6.86	\$6.09	\$5.89	\$7.51	\$6.46	\$5.15	\$5.36	\$5.20
Typical household sale price.....	8.00	8.00		7.25	8.75		7.75	9.00		8.00	9.01		7.25	7.26	
(Gross margin.....)	1.89	1.89		1.47	2.18		1.98	2.48		1.50	2.61		1.90	2.10	
Typical city contract sale price.....				8.18	8.18										
Gross margin.....				1.61	1.61										
OCTOBER.															
Cost price.....	5.36	6.11	6.04	6.58	9.32	7.32	6.68	9.42	6.88	6.82	9.07	7.99	5.15	5.63	5.50
Typical household sale price.....	8.00	8.50		7.50	9.06		7.75	10.50		8.33	10.50		6.83	7.90	
(Gross margin.....)	1.89	3.14		1.26	2.42		1.42	2.82		.53	2.87		1.20	2.75	
NOVEMBER.															
Cost price.....	6.10	6.10	6.10	5.63	9.53	6.62	5.67	8.97	7.40	5.71	9.19	7.62	5.15	7.70	6.95
Typical household sale price.....	8.38	8.38		7.50	12.00		7.75	12.00		8.00	12.00		8.00	10.00	
(Gross margin.....)	2.28	2.28		.77	4.98		1.22	4.11		.64	3.54		.30	3.96	
Typical city contract sale price.....	8.18	8.18		8.18	8.18										
Gross margin.....	2.08	2.08		1.60	1.60										
DECEMBER.															
Cost price.....	6.08	6.08	6.08	6.55	8.98	7.61	6.71	8.45	8.19	6.80	10.17	8.11	5.15	7.64	7.13
Typical household sale price.....	8.63	8.63		9.50	11.66		9.80	12.00		8.67	10.95		8.00	10.00	
(Gross margin.....)	2.55	2.55		1.28	3.95		1.68	5.26		1.79	2.27		.36	3.67	
Typical city contract sale price.....	8.18	8.18		8.18	8.18										
Gross margin.....	2.10	2.10		1.63	1.63										

¹ Loss.

TABLE 41.—*Maine, New Hampshire, and Northeastern Massachusetts (Portland, Me.; Dover, Manchester, and Portsmouth, N. H.; and Lawrence, Mass.). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 5 representative dealers, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 153.]

[Wherever in this table three prices are shown, they represent prices around the 5th, 15th, and 25th of the month.]

[See Table 40 for summary of this table.]

BROKEN.

	September.					October.					November.					December.				
	Household.		City contract.		Cost price.	Household.		City contract.		Cost price.	Household.		City contract.		Cost price.	Household.		City contract.		Gross margin.
Company No. 3.....	\$8.00	\$1.89	.....	.....	\$6.11	\$8.00	\$1.89	.....	.....	\$6.10	\$8.38	\$2.28	\$8.18	\$2.08	\$8.63	\$2.55	\$8.18	\$2.10	.....	.....
	8.00	1.89	.....	.....		8.00	1.89	.....	.....		8.38	2.28	8.18	2.08	8.63	2.55	8.18	2.10	.....	.....
Company No. 4.....	.....	.....	.....	.....	.....	8.50	3.14	.....	.....	.....	8.38	2.28	8.18	2.08	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	8.50	3.14	.....	.....	.....	8.38	2.28	8.18	2.08	.....	.....	.....	.....	.....	.....
Minimum.....	6.11	8.00	.....	.....	5.36	8.00	1.89	.....	.....	6.10	8.38	2.28	8.18	2.08	6.08	8.63	2.55	8.18	2.10	.....
Maximum.....	6.11	8.00	.....	.....	6.11	8.50	3.14	.....	.....	6.10	8.38	2.28	8.18	2.08	6.08	8.63	2.55	8.18	2.10	.....
Weighted average.....	6.11	.....	.....	.....	6.04	.....	.....	.....	.....	6.10	.....	.....	.....	.....	6.08	.....	.....	.....	.....	.....

TABLE 41.—*Maine, New Hampshire, and Northeastern Massachusetts (Portland, Me.: Dover, Manchester, and Portsmouth, N. H.: and Lawrence, Mass.). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 5 representative dealers, September — December, 1916—Continued.*

EGG.

	September.				October.				November.				December.			
	Household.		City contract.		Household.		City contract.		Household.		City contract.		Household.		City contract.	
	Cost price.	Sale price.	Gross mar- gin.		Cost price.	Sale price.	Gross mar- gin.		Cost price.	Sale price.	Gross mar- gin.		Cost price.	Sale price.	Gross mar- gin.	
Company No. 1.....	\$6.43	\$8.25	\$1.82		\$6.70	\$8.25	\$1.55		\$7.02	\$10.00	\$2.98		\$8.72	\$11.66	\$2.94	
		8.50	2.07			8.50	1.80			10.50	3.48			10.00	1.28	
		8.25	1.82			8.25	1.55			12.00	4.98					
Company No. 2.....	5.45	7.25	1.80		7.31	7.50	.19		5.63	7.50	1.87					
		7.50	2.05			7.50	.19			8.25	2.62					
		7.50	2.05			8.13	.82			7.75	2.12					
Company No. 3.....	6.57	8.75	2.18		6.58	9.00	2.42		6.58	9.50	2.92		6.55	9.50	2.95	\$1.63
		8.75	2.18			9.00	2.42			9.50	2.92			9.50	2.92	1.63
		8.75	2.18			9.00	2.42			9.50	2.92			10.50	3.95	1.63
Company No. 4.....	7.24	8.71	1.47		9.32	9.06	1.26		9.53	10.30	.77		8.94	10.73	1.75	
		8.71	1.47			9.06	1.26			10.30	.77			10.73	1.75	
Company No. 5.....										10.30	.77			10.73	1.75	
										12.00	4.14					
										12.00	4.14					
Minimum.....	5.45	7.25	1.47		6.58	7.50	1.26		7.86	12.00	4.14		6.55	9.50	1.28	1.63
Maximum.....	7.24	8.75	2.18		9.32	9.06	2.42		5.63	7.50	.77		8.98	11.66	3.95	1.63
Weighted average.....	6.14				7.32				6.62	12.00	4.98		7.61			

TABLE 42.—*Central Massachusetts (Holyoke, Northampton, Springfield, and Worcester). Summary for 5 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916.*

(Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.)

[See Table 43 for detail by companies.]

	Broken.			Egg.			Stove.			Chestnut.			Pea.		
	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.	Mini- mum.	Maxi- mum.	Weighted average.
SEPTEMBER.															
Cost price.....	5.58	5.62	\$5.62	\$5.97	\$6.11	\$6.08	\$5.89	\$6.30	\$6.19	\$6.00	\$6.35	\$6.24	\$4.39	\$4.88	\$4.74
Typical household sale price.....				8.48	8.65		8.06	8.85		8.33	8.98		7.25	7.68	
Gross margin.....				2.44	2.63		1.88	2.84		2.11	2.73		2.70	2.86	
Typical industrial contract sale price.....	6.61	6.70					7.75	8.25		7.00	8.20				
Gross margin.....							1.57	2.07		.78	1.98				
Typical yard sale price.....	.99	1.12					7.85	7.85		7.85	7.85				
Gross margin.....							1.55	1.55		1.50	1.50				
OCTOBER.															
Cost price.....	5.58	5.61	5.61	6.12	8.26	6.21	5.92	7.03	6.27	6.08	8.53	6.36	4.45	6.07	4.96
Typical household sale price.....				8.61	8.87		8.21	9.07		8.48	9.10		7.34	7.88	
Gross margin.....				.61	2.61		1.14	2.91		.55	2.75		1.51	2.99	
Typical industrial contract sale price.....	6.61	6.70					7.88	8.00		8.60	8.60				
Gross margin.....							1.55	1.79		2.24	2.24				
Typical yard sale price.....	1.00	1.12								7.85	7.85				
Gross margin.....										1.49	1.49				
NOVEMBER.															
Cost price.....	5.58	5.63	5.62	6.22	7.45	6.51	6.38	9.91	6.57	6.34	9.61	6.73	4.58	5.31	5.24
Typical household sale price.....				9.03	10.72		8.50	9.62		8.25	9.62		7.75	8.25	
Gross margin.....				2.42	3.27		1.96	3.18		1.66	2.92		2.59	3.17	
Typical industrial contract sale price.....	6.61	6.70					7.25	9.13		6.50	9.10				
Gross margin.....	.98	1.12					.77	2.66		.17	2.31				
DECEMBER.															
Cost price.....	5.58	5.63	5.63	6.13	7.19	6.39	6.38	8.13	6.60	6.64	8.29	6.86	4.58	5.48	5.28
Typical household sale price.....				9.00	10.23		8.72	10.50		9.32	10.50		8.09	8.58	
Gross margin.....				2.87	3.38		2.19	3.69		2.63	3.46		2.61	4.00	
Typical industrial contract sale price.....	6.61	6.70		7.59	7.70		7.73	9.23		7.95	9.12				
Gross margin.....	.98	1.12		.80	1.57		1.27	2.66		.91	2.41				

1 Loss.

TABLE 43.—*Central Massachusetts (Holyoke, Northampton, Springfield, and Worcester). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 5 representative dealers, September — December, 1916.*

[Wherever in this table 3 prices are shown they represent prices around the 5th, 15th, and 25th of the month.]

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 42 for summary of this table.]

BROKEN.

	September.						October.						November.						December.					
	Household.			Industrial contract.			Yard.			Household.			Industrial contract.			Yard.			Household.			Industrial contract.		
	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.
Company No. 1.....	\$5.62			\$6.61	\$0.99		\$6.61	\$1.00		\$6.61		\$5.61	\$6.61	\$0.98		\$6.61		\$5.63	\$6.61		\$5.63	\$6.61	\$0.98	
				6.61	.99		6.61	1.00		6.61		6.61	6.61	.98		6.61		6.61	6.61		6.61	6.61	.98	
				6.70	1.12		6.70	1.12		6.70		6.70	6.70	1.12		6.70		6.70	6.70		6.70	6.70	1.12	
Company No. 4.....	5.58			6.70	1.12		6.70	1.12		6.70		5.58	6.70	1.12		6.70		5.58	6.70		5.58	6.70	1.12	
				6.70	1.12		6.70	1.12		6.70		6.70	6.70	1.12		6.70		6.70	6.70		6.70	6.70	1.12	
Minimum.....	5.58			6.61	.99		6.61	1.00		6.61		5.58	6.61	.98		6.61		5.58	6.61		5.58	6.61	.98	
Maximum.....	5.62			6.70	1.12		6.70	1.12		6.70		5.62	6.70	1.12		6.70		5.62	6.70		5.62	6.70	1.12	
Weighted average..	5.62											5.61						5.62			5.63			

EGG.

Company No. 1.....	\$5.97	\$8.48 2.51 8.48 2.51	\$6.12	\$8.62 \$2.50 8.62 2.50	\$6.99	\$9.41 \$2.42 9.41 2.42	\$6.99	\$9.98 \$2.99 9.98 2.99	
Company No. 2.....			8.26	8.87 .61 8.87 .61			7.19	10.23 3.04 10.23 3.04	
Company No. 3.....							6.13	9.00 2.87 9.00 2.87	
Company No. 4.....	6.01	8.64 2.62 8.64 2.62	6.17	8.61 2.44 8.61 2.44	7.45	10.72 3.27 10.72 3.27	6.79	9.72 2.93 7.98 .80 9.72 2.93 7.98 .80	
Company No. 5.....	6.11	8.55 2.44 8.55 2.44	6.14	8.70 2.56 8.70 2.56	6.22	9.03 3.81 9.03 3.81	6.32	9.25 2.93 9.25 2.93	
Minimum.....	5.97	8.65 2.46 8.65 2.46	6.12	8.75 2.61 8.75 2.61	6.22	9.43 3.21 9.43 3.21	6.13	9.65 3.38 9.65 3.38	
Maximum.....	6.11	8.65 2.62 8.65 2.62	8.26	8.87 2.61 8.87 2.61	7.45	10.72 3.27 10.72 3.27	7.19	9.00 2.87 7.59 .80 9.00 2.87 7.59 .80	
Weighted average.....	6.08		6.21		6.51		6.39	7.19 3.38 7.70 1.57 7.19 3.38 7.70 1.57	

STOVE.

Company No. 1.....	\$5.89	\$8.73 2.81 8.73 2.81	\$5.92	\$8.83 \$2.91 8.83 2.91	\$6.38	\$9.56 \$3.18 9.56 3.18	\$6.38	\$10.07 \$3.69 10.07 3.69	
Company No. 2.....			7.93	9.07 1.14 9.07 1.14	9.91	8.95 1.96 8.95 1.96	8.13	10.32 2.19 10.32 2.19	
Company No. 3.....	6.18	8.17 1.95 8.17 1.95	6.21	8.36 2.15 8.36 2.15	6.48	8.50 2.02 \$7.25 \$0.77 8.50 2.02 \$7.25 \$0.77	6.46	8.72 2.28 \$7.77 \$1.31 8.72 2.28 \$7.77 \$1.31	
Company No. 4.....	6.23	8.06 2.43 8.06 2.43	6.38	8.81 2.43 8.81 2.43	8.10	9.62 1.52 9.62 1.52	7.66	9.44 2.98 7.73 1.27 9.44 2.98 7.73 1.27	
Company No. 5.....	6.30	8.70 2.46 8.70 2.46	6.35	8.79 2.44 8.79 2.44	6.47	8.90 2.43 8.18 1.71 8.90 2.43 8.18 1.71	6.57	10.50 2.84 9.06 1.40 10.50 2.84 9.06 1.40	
Minimum.....	5.89	8.63 2.36 8.63 2.36	6.21	8.21 2.00 7.88 1.67 8.21 2.00 7.88 1.67	6.38	8.50 2.06 9.13 2.66 8.50 2.06 9.13 2.66	6.38	9.08 2.51 8.22 1.65 9.08 2.51 8.22 1.65	
Maximum.....	6.30	8.75 2.81 8.75 2.81	7.93	9.07 1.14 7.88 1.65 9.07 1.14 7.88 1.65	9.91	9.43 2.96 9.13 2.66 9.43 2.96 9.13 2.66	8.13	10.00 3.43 8.83 2.26 10.00 3.43 8.83 2.26	
Weighted average.....	6.13		6.27		6.57		6.60	8.72 2.19 7.73 1.27 8.72 2.19 7.73 1.27	

LOSS.

TABLE 43.—*Central Massachusetts (Holyoke, Northampton, Springfield, and Worcester). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 5 representative dealers, September — December, 1916—Continued.*

CHESTNUT.

	September.						October.						November.						December.								
	House-hold.			Industrial contract.			Yard.			House-hold.			Industrial contract.			Yard.			House-hold.			Industrial contract.			Yard.		
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.		
Company No. 1.....	\$6.00	\$8.73	\$2.73	8.73	2.73	\$6.08	8.83	2.75	8.83	2.75	\$6.64	9.56	2.92	9.56	2.92	\$6.64	10.07	3.43	10.07	3.43	\$6.04	10.07	3.43	10.07	3.43		
Company No. 2.....		8.73	2.73			8.53	9.08	.55			9.61	8.95	1.66			8.26	10.32	2.03	10.32	2.03		10.32	2.03				
Company No. 3.....	6.22	8.50	2.28	8.44	2.22	6.34	8.48	2.14	8.50	2.16	6.34	8.25	1.91	8.25	1.91	6.34	8.25	1.91	8.25	1.91	7.04	10.50	3.46	10.50	3.46		
Company No. 4.....	6.27	8.94	2.67	8.94	2.67	6.35	8.98	2.63	8.98	2.63	6.73	8.99	2.26	8.99	2.26	6.73	8.99	2.26	8.99	2.26	7.24	9.96	2.72	9.96	2.72		
Company No. 5.....	6.35	8.88	2.53	8.88	2.53	6.36	9.10	2.74	9.10	2.74	6.79	9.15	2.36	9.15	2.36	6.79	9.15	2.36	9.15	2.36	7.24	9.96	2.72	9.96	2.72		
Minimum.....	6.00	8.33	2.33	8.33	2.33	6.08	8.48	.55	8.48	.55	6.34	8.25	1.49	8.25	1.49	6.34	8.25	1.49	8.25	1.49	6.71	9.41	2.70	9.41	2.70		
Maximum.....	6.35	8.98	2.73	8.98	2.73	6.53	9.10	2.75	9.10	2.75	6.61	9.62	2.66	9.62	2.66	6.61	9.62	2.66	9.62	2.66	8.23	10.50	3.46	10.50	3.46		
Weighted average..	6.24					6.36					6.73					6.73					6.80						

1 Loss.

TABLE 44.—Connecticut (Hartford, New Haven, and New London). Summary for 5 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September — December, 1916.

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 45 for detail by companies.]

1916.	Broken.			Egg.			Stove.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
SEPTEMBER.									
Cost price.....	\$4.61	\$5.27	\$5.08	\$5.09	\$5.75	\$5.38	\$5.24	\$5.93	\$5.58
Typical household sale price.....	7.50	7.80	.....	7.80	8.35	.....	7.80	8.60	.....
Gross margin.....	2.23	3.07	.....	2.31	3.11	.....	2.30	3.14	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	7.70	7.70	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	1.81	1.81	.....
OCTOBER.									
Cost price.....	4.61	5.54	5.22	5.13	5.99	5.48	5.42	6.03	5.64
Typical household sale price.....	7.50	8.10	.....	8.10	9.35	.....	8.13	8.85	.....
Gross margin.....	1.96	3.49	.....	2.24	4.13	.....	2.63	3.39	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	7.91	8.01	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	1.88	1.98	.....
NOVEMBER.									
Cost price.....	4.61	5.27	5.25	5.13	7.03	5.98	5.43	6.78	6.14
Typical household sale price.....	7.50	8.10	.....	8.20	10.00	.....	8.48	10.00	.....
Gross margin.....	2.23	3.49	.....	1.63	4.65	.....	2.33	4.57	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	7.79	8.03	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	1.01	1.25	.....
DECEMBER.									
Cost price.....	5.27	5.27	5.27	5.36	6.80	6.40	6.02	7.02	6.49
Typical household sale price.....	7.81	8.10	.....	8.35	10.00	.....	8.18	10.00	.....
Gross margin.....	2.54	2.83	.....	1.55	4.64	.....	1.64	3.98	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	7.89	7.99	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	.87	.97	.....

FIG.

	\$7.80	\$2.71	\$8.50	\$3.37	\$9.00	\$3.87	\$9.25	\$3.00
Company No. 1.....	\$5.09	7.80	2.71	8.50	3.37	9.00	9.25	3.00
		7.80	2.71	8.50	3.37	9.00	9.25	3.00
Company No. 2.....	5.75	8.23	2.48	8.10	2.38	8.26	8.58	2.24
		8.18	2.43	8.18	2.46	8.26	8.76	2.42
		8.39	2.54	8.26	2.54	8.43	9.40	3.06
Company No. 3.....	5.56	7.87	2.31	8.23	2.24	8.77	8.89	2.14
		7.87	2.31	8.41	2.24	8.77	8.73	1.98
		8.31	2.31	8.41	2.24	8.77	8.83	2.08
Company No. 4.....	5.24	7.85	2.61	8.15	2.88	8.20	9.48	2.68
		8.35	3.11	8.10	2.88	8.20	8.83	2.03
		8.02	2.78	9.35	2.13	9.65	8.35	1.55
Company No. 5.....	5.26	8.00	2.74	8.00	4.63	9.50	10.00	4.64
		8.00	2.74	8.50	3.13	9.50	9.75	4.39
Minimum.....	5.09	7.80	2.31	9.00	3.63	10.00	9.75	4.39
Maximum.....	5.75	8.35	3.11	8.10	2.24	8.20	8.35	1.55
Weighted average.....	5.33			9.35	4.13	10.00	10.00	4.64
				5.48			6.40	

STOVE.

[illegible]

TABLE 45.—*Connecticut (Hartford, New Haven, and New London). Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, used by principal classes of business, for 5 representative dealers, September — December, 1916—Continued.*

CHESTNUT.

	September.				October.				November.				December.						
	Household.		Industrial contract.		Cost price.	Household.		Industrial contract.		Cost price.	Household.		Industrial contract.		Cost price.	Household.		Industrial contract.	
	Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.		Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.		Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.		Sale price.	Gross mar- gin.	Sale price.	Gross mar- gin.
Company No. 1.....	\$7.30	\$2.54			\$5.71	\$8.50	\$2.79			\$5.94	\$9.00	\$3.06			\$9.25	\$3.36			
	7.30	2.54				8.50	2.79				9.00	3.06			9.25	3.36			
	8.33	2.39				8.73	2.75				8.85	2.70			8.14	1.86			
Company No. 2.....	8.34	2.58			5.98	8.73	2.81			6.15	8.60	2.45			9.26	2.98			
	8.00	2.64				8.79	2.81				8.60	2.45			9.14	2.86			
	8.33	2.62	\$7.73	\$1.82		8.78	2.74	\$7.93	\$1.94		8.96	2.24			9.42	2.89	\$7.98	\$1.45	
Company No. 3.....	8.33	2.62	7.73	1.82	6.04	8.73	2.74	7.83	1.79	6.72	9.43	2.71	8.09	1.37	9.27	2.74	7.88	1.35	
	8.33	2.62	7.73	1.82		8.81	2.77	7.89	1.85		8.80	2.08	8.09	1.37	9.09	2.56	8.00	1.47	
	8.43	2.97				8.68	3.22				8.42	1.71			10.00	3.06			
Company No. 4.....	8.51	3.02			5.46	8.95	3.49			6.71	9.26	2.55			9.45	2.51			
	8.43	3.05				9.23	3.77				10.28	3.57			8.35	1.41			
	7.95	2.40				8.00	2.40				9.50	3.88			10.00	3.53			
Company No. 5.....	8.00	2.45			5.60	8.50	2.90			5.62	9.50	3.88			9.50	3.03			
	8.00	2.45				9.00	3.40				10.00	4.38			9.50	3.03			
Minimum.....	7.33	1.82			5.46	8.00	2.40	7.83	1.79	5.62	8.42	1.71	7.80	1.08	8.14	1.41	7.88	1.35	
Maximum.....	8.60	3.05			6.04	9.23	3.77	7.93	1.94	6.72	10.28	4.38	8.09	1.37	10.00	3.53	8.00	1.47	
Weighted average.....	8.01	2.61			5.73					6.30							6.50		

PEA.

Company No. 1.	\$3.35	\$6.25	\$2.90	\$3.75	\$6.50	\$2.75	\$7.50	\$3.75	\$7.25	\$3.50
Company No. 2.	4.08	6.25	2.90	3.75	6.50	2.75	7.50	3.75	7.25	3.50
Company No. 3.		6.25	2.90	3.75	6.50	2.75	7.50	3.75	7.25	3.50
Company No. 4.	3.94	6.25	2.90	3.75	6.50	2.75	7.50	3.75	7.25	3.50
Minimum.	3.35	6.25	2.90	3.75	6.50	2.75	7.50	3.75	7.25	3.50
Maximum.	4.08	6.25	2.90	3.75	6.50	2.75	7.50	3.75	7.25	3.50
Weighted average.	3.96	6.25	2.90	3.75	6.50	2.75	7.50	3.75	7.25	3.50

BUCKWHEAT.

Company No. 2.	\$4.25	\$1.04	\$4.25	\$1.04	\$4.25	\$1.04	\$4.25	\$1.04	\$4.25	\$1.04	\$4.25	\$1.04
Company No. 2.	\$3.21	4.25	1.04	4.25	1.04	4.25	1.04	4.25	1.04	4.25	1.04	4.25
Minimum	3.21	4.25	1.04	3.21	4.25	1.04	3.21	4.25	1.04	3.21	4.25	1.04
Maximum	3.21	4.25	1.04	3.21	4.25	1.04	3.21	4.25	1.04	3.21	4.25	1.04
Weighted average	3.21	4.25	1.04	3.21	4.25	1.04	3.21	4.25	1.04	3.21	4.25	1.04

NEW YORK CITY.

Transportation.—Anthracite coal comes to New York City over the following initial coal-carrying railroads: Central of New Jersey; Delaware, Lackawanna & Western; Erie; Lehigh Valley; New York, Ontario & Western; Pennsylvania; and Philadelphia & Reading.

No road carries coal into New York City, coal being brought to various New Jersey ports and transported in barges and floats across the river. These ports are known as upper and lower ports. South Amboy, Perth Amboy, Port Reading, Elizabethport, and Port Johnson are the lower ports. Cornwall, Edgewater, Weehawken, Hoboken, and Port Liberty are the upper ports. The freight rates on prepared sizes from the anthracite fields to the lower and upper ports are \$1.40 and \$1.45, respectively. The railroad coal companies own or control a small number of barges which transport coal from the Jersey ports to the New York retailers' yards. A few of the retailers operate barges of their own, but the greater number hire outside barges. Normally the barge rate from the lower ports is about 20 cents, which is 5 cents more than that from the upper ports. This equalizes the 5-cent differential in freight rates between the upper and lower ports, and thus the alongside price of coal from the lower and upper ports is the same to the retailer situated in the central part of New York City.

Sources of supply and local distribution.—All of the railroad coal companies or their sales companies or agents maintain sales offices in New York City and sell principally to retailers direct. Every important independent producing company and the greater number of smaller ones are represented either by sales agents or jobbers. The large jobbing houses of Philadelphia also maintain branch offices in New York City. In fact, New York is in a position to obtain its supply of anthracite from any colliery in the anthracite fields. It is frequently spoken of as the dumping ground. This is probably due to the fact that coal which is mined, but not sold, is generally sent to New York tidewater for sale at the prevailing market price or for storage. Thus, New York is the point to which the independent producing companies ship their surplus coal. All coal sent to New York tidewater is available for shipment not only to New York City but to New England and Canada. In 1915 15,864,800 net tons of anthracite, or 17.8 per cent of the total production, were shipped to New York tidewater.¹

The retailers of New York are thus in a position to obtain coal from all the railroad coal companies, the greater number of independent producing companies, sales agencies, and important eastern jobbers.

The annual consumption of anthracite in Manhattan, Queens, and The Bronx is estimated at 7,000,000 tons. Except for the quantity sold by producing companies and jobbers to gas and electric companies, railroads, and manufacturing concerns direct, this tonnage is distributed by 61 retailers. Two of these do not maintain yards in New York, but deliver from their yards in New Jersey.

¹ Mineral Resources of the United States, 1915, Part II, p. 501.

Local shortage and its causes.—Despite the fact that during the summer of 1916 the producing companies and sales agents had been urging the retailers to prepare for a shortage of coal during the coming winter, and the retailers in turn had been urging their customers to fill their coal bins, New York City was not prepared for a shortage. In some respects this condition was not abnormal. The average apartment house, hotel, or office building has no facilities for the storage of coal. They are forced to purchase their requirements in amounts which last them but a few weeks. Further, the retailers are in a similar position. Their coal yards are necessarily situated along the water front where space is very expensive. It is not feasible, therefore, to erect large storage pockets, so their supply is adequate for only their temporary needs. Thus, on the 1st of September the 15 retailers from whom the Commission has reports, had on hand 194,166 net tons of anthracite. During the month of September these retailers sold 249,960 net tons. Assuming that this represents the condition of the typical retailer, New York City's supply of coal on September 1 was sufficient for only 23 days' requirements.

The retailers are consequently dependent upon a constant supply of coal at tidewater. The storage yards of the railroad coal companies, which are situated near tidewater, and the surplus coal of the independent producers, which is shipped to New York, are the sources to which the New York retailers have looked to make up for their inadequate storage facilities. Normally this supply is more than sufficient to meet the retailers' requirements, and is not seriously diminished even when certain other cities in the country are short of anthracite. But during the early fall of 1916 the quantity of coal in storage at tidewater rapidly diminished and the amount of coal, produced by both railroad and independent producing companies, which was being shipped to tidewater was much less than in previous years. Especially was there a shortage in delivery of railroad company coal. This shortage became very noticeable about the 1st of October. The retailers were able to obtain only about 50 per cent of their normal supply of "company" coal. The railroad coal companies explained that the shortage at New York was due in great part to the fact that they were shipping large quantities of coal to the Great Lakes and the West; that as soon as navigation closed on the Great Lakes, New York would receive its normal supply. During the latter part of October the stocks of the retailers were nearly depleted.

At this time the press began to publish articles on the great scarcity of anthracite coal and predicted \$15 to \$20 coal during the coming winter. The effect of these articles was very great. Everyone wanted coal at once. Those who had sufficient coal for the winter placed orders for more coal; apartment houses and hotels which normally kept a two-week supply on hand ordered quantities sufficient for several months; and those householders who generally purchased but a few tons at a time attempted to fill their bins. In many cases the retailers were unable to find suitable storage facilities where they delivered because people were buying more coal than they could conveniently store.

This abnormal concentration of demand was due in great part to the effect of the articles in the press which predicted \$20 coal and a

coal famine. Further there was an increased demand from other sources. The shortage of bituminous coal brought many purchasers of soft coal into the anthracite market. This feature became very prominent in New York. Many office buildings used anthracite instead of bituminous. Jobbers who had contracted for the sale of bituminous entered the anthracite market to purchase boiler and screenings, which they mixed with bituminous. As was to be expected, there was an addition to the demand for steam sizes of anthracite from the many office buildings and apartment houses erected during the preceding year. The increased call for steam sizes resulted in raising the price of buckwheat at times to within 50 cents of the price of prepared sizes.

Wholesale prices.—The conditions were very favorable for the sale of premium coal. The retailers feared they would soon be out of coal if they depended upon the railroad coal companies. Premium coal therefore began to appear the latter part of September, when the independent operators and jobbers who had coal at tidewater were able to obtain 25 cents to 50 cents per ton above circular for it. Until the 20th of October the premiums averaged about 60 cents per ton, but during the last few days of the month there were obtained premiums of \$1.50. During the following week wholesale prices at tidewater went to \$10, \$11, and \$12 per gross ton, which meant that the independent operators and jobbers were obtaining premiums of as much as \$6.50. The middle of November brought a decline to \$9 per gross ton, but the price quickly advanced to \$10 per gross ton during the latter part of November and remained at that price until the middle of December, when it declined to \$7.50 and \$8 per gross ton. During the latter part of the month, however, it advanced again to \$9 per gross ton.

Gross margins of local jobbers.—Among the jobbers from whom the Commission obtained reports are six who may be classed as local jobbers, i. e., those who sell chiefly in the New York market. They are as follows: Borden & Lovell; A. S. Davison Coal Co.; Dexter & Carpenter; Gavin Rowe; Frederick C. Russell; and Sandford & Talbott.

The firms listed above sold 242,971 gross tons of anthracite in 1915, 254,115 in 1916, and during the periods September to December, inclusive, 1915 and 1916, 107,659 and 96,944, respectively.

The gross margins per gross ton of each of these jobbers, classified according to the source and size of coal, during the months of September, October, November, and December, 1916, are shown in the following table.

TABLE 46.—*Gross margins per gross ton of New York local jobbers, by months, September — December, 1916.*

Jobber.	Source of coal.	Size of coal.	1916			
			Sept.	Oct.	Nov.	Dec.
No. 1.....	Railroad coal companies.....	Prepared..	\$0. 26	\$1. 33	\$0. 38	\$0. 92
Do.....	do.....	Steam.....		¹ — .02	.12	.10
Do.....	Jobbers.....	do.....	.13	.25	.10	.12
Do.....	do.....	Prepared..		.14	.20	.35
Do.....	Retailer.....	All.....	.71	1. 30	1. 19	.....
Do.....	Weighted average of all business.	do.....	.31	.28	.23	.17
No. 2.....	do.....	do.....	.05	.21	.33	.15
No. 3.....	do.....	do.....	.13	.25	.39	.01
No. 4.....	Railroad coal companies.....	do.....	⁴ .08	.25	.17	.36
Do.....	Jobbers.....	do.....	.14	.44	.23	.41
Do.....	Weighted average of all business.	do.....	⁴ .01	.28	.18	.39
No. 5.....	do.....	do.....	.11	.64	.68	.89
No. 6.....	Jobbers.....	Steam.....		.06	.31	.40
Do.....	do.....	Prepared..		.15	.35	.28
Do.....	Railroad coal companies.....	All.....		.44	1. 91	.....
Do.....	Weighted average of all business.	do.....		.17	.47	.36
Total weighted average of all business.	.....	.....	.09	.31	.39	.40
Total tonnage sold.....	.....	.....	12, 676	24, 946	37, 215	22, 107

¹ Loss due to heavy demurrage.² All coal purchased from jobbers.³ Only small tonnage handled. Small profit due to miscalculation of market.⁴ Loss.

The individual margins vary considerably as between one jobber and another, even during September, a normal month. This is in great part due to the small tonnage handled by each jobber, the profit or loss on one or two cargoes having a great weight in the average gross margin for a month. Thus, jobber No. 1 had a gross margin of 31 cents per gross ton on all business in September, which was more than the margins during any of the last three months of the year. This was due to large profits on two cargoes sold under special conditions. The gross margin of jobber No. 4, on the other hand, showed a loss of \$0.01 per gross ton on all business during September, which is accounted for by special circumstances.

However, the average gross margin of \$0.09 per gross ton for all the anthracite sold by the six jobbers during September is representative of jobbers' gross margins during a normal period. During October the average gross margins of the six jobbers varied from \$0.17 to \$0.64, while the gross margins on the various kinds of business, where the Commission secured such data, ranged from a loss of \$0.02 to a profit of \$1.33. During November the average gross margins varied from \$0.18 to \$0.68, while in December the range was from \$0.01 to \$0.89. These great differences were due, on the one hand, to the percentage of business which applied on contracts, and, on the other hand, to the percentage of railroad company coal handled. On the former the profits were small—in a great number of cases there were losses. On railroad company coal the profits were very large. Thus, the margins of jobber No. 1 on company coal were \$0.26, \$1.33, \$0.38, and \$0.92; of jobber No. 4 they were from a loss of \$0.08 to a profit of \$0.25, \$0.17, and \$0.35; and jobber No. 6 had a profit of \$0.44 and \$1.91 on company coal handled in October and November.

While the individual margins varied greatly, the average gross profits on all coal sold by the seven jobbers represent the typical profits of jobbers during the period considered. Assuming \$0.09, the average margin for September, to be the jobber's normal profit, the

\$0.31 margin in October is an increase of 244 per cent. the \$0.39 for November is an increase of 333 per cent, while the profit of \$0.40 in December is an increase of 344 per cent over the normal profit. When it is considered that a material percentage of the coal sold by these jobbers was handled at a small profit, some even at a loss, it is safe to say that on the class of business termed "spot sales" the average profits were an increase of some 500 per cent over the normal profits.

Retail prices.—The variations of the prices charged by New York retailers closely followed those of the independent operators and jobbers. However, there was no strict uniformity among the various retailers' prices. They not only varied widely as between The Bronx and Manhattan, but also among direct competitors in the same districts. Thus a certain retailer was selling prepared sizes at \$8.50 per net ton when his competitor was selling the same coal at \$12 per net ton. This wide range of retail prices was due chiefly to the varying proportions of coal which each retailer was able to obtain at circular prices. Thus, one prominent retailer did not purchase any premium coal until the middle of January, 1917, while two others were able to obtain so large a proportion of their coal at circular prices that they had to buy only a few cargoes of premium coal during the season. The prices which these retailers charged were not as great as those charged by one retailer, for example, who was forced to purchase over 50 per cent of his supply at prices ranging from \$8 to \$11.50, representing a premium of \$2.50 to \$6.

Thus it might be said, roughly, that there were two distinct ranges of retail prices in New York City. The higher retail prices which prevailed especially in The Bronx were as follows, though there were individual variations from these prices:

	Sept. 1.	Oct. 5.	Oct. 25.	Oct. 30.	Nov. 15.	Nov. 25.	Dec. 10.	Dec. 27.
White ash:								
Broken.....	\$7.20	\$7.25	\$9.50	\$12.00	\$9.50	\$8.50	\$3.00	\$8.75
Egg.....	7.20	7.50	9.75	12.25	9.50	8.50	8.00	8.75
Stove.....	7.45	7.75	9.75	12.25	9.50	8.50	8.00	8.75
Nut.....	7.50	7.75	9.75	12.25	9.50	8.50	8.00	8.75
Pea.....	5.85	5.85	6.25	7.00	7.00	6.75	6.25	6.75
Buckwheat No. 1.	4.65	4.75	5.75	6.50	6.25	6.00	5.50	6.25
Buckwheat No. 2.	4.25	4.35	5.25	6.00	5.75	5.50	5.00	5.75

Dates signify when price changes were made. Prices are for net ton. This list was for domestic trade. At beginning of period apartments and hotels were supplied egg, stove, and nut sizes at discounts of 25 and 50 cents, respectively, and broken, pea, and smaller sizes at discounts of 50 cents and 75 cents, respectively, from these prices, but later there was very little difference in prices for domestic use and apartments.

The other set of prices which may be said to have been those charged by the retailers who were not forced to purchase large quantities of premium coal were, roughly, as follows:

	Sept. 1.	Oct. 25.	Nov. 7.	Nov. 15.	Dec. 5.	Dec. 26.
White ash:						
Broken.....	\$7.20	\$7.50	\$9.00	\$8.50	\$7.75	\$8.00
Egg.....	7.20	7.50	9.50	8.75	8.00	8.50
Stove.....	7.45	7.75	9.50	8.75	8.00	8.50
Nut.....	7.50	7.75	9.50	8.75	8.00	8.50
Pea.....	5.85	6.00	6.25	6.25	6.25	6.75
Buckwheat No. 1.	4.65	5.00	5.50	5.50	5.50	5.75
Buckwheat No. 2.	4.25	4.50	4.75	4.50	4.50	4.75

The Commission obtained data sufficient to approximate the gross margins of the following retailers of New York City:

Burns Bros.	Perry, O. H., & Son.
Gordon, Joseph (Inc.).	Rheinfrank, J., & Co.
Gordon, Robert, & Son.	Robetzek, L., & Bro.
Hencken & Willenbrock.	Skidmore's, Jeremiah, Sons.
Leonard Coal Co.	Stephens, Olin J. (Inc.).
Meyer-Denker-Sinram Co.	Trimmer, S., & Sons.
Owens & Co.	Weber-Bunke-Lange Co.

The above-named dealers sold 4,164,858 net tons of anthracite in 1915 and 4,463,772 in 1916, which is about 75 per cent of the quantity retailed in New York City.

Table 48 presents cost prices per net ton, each size, alongside retailers' yards; typical sales prices per net ton, each size, for various classes of business, sidewalk deliveries; gross margins for each size of coal and class of business.

The cost prices shown in the table are weighted averages of the purchase prices of coal on hand at the beginning of a given month taken with the prices of coal purchased during the same month. Thus, for instance, the cost price of broken coal for September is the weighted average of the inventory price of broken coal on hand September 1, and of the cost prices of broken coal arriving at the retailers' yards during September. The cost price includes the cost of the coal f. o. b. vessels at the New Jersey piers, plus the water freight on the coal transported across the harbor and delivered alongside the retailers' pockets. It does not include demurrage, trimming, or discharging charges, which must be considered as expenses to come out of the dealers' gross margin along with his other expenses of doing business.

The sales prices shown in the table may be explained as follows: Household sales prices represent the typical prices at which coal was sold to householders. Apartment house and hotel sales prices represent the typical prices at which coal was sold for use in apartment houses, hotels, and small office buildings. While in a few cases the retailers charged different prices for coal sold to apartments, as compared with hotels, etc., it has been necessary to lump these kinds of business together because it was impossible to select prices typical of each of them as a separate class. Yard prices are the prices charged those who hauled the coal from the retailers' yards in their own conveyances. Practically all of the coal sold under these terms was purchased by peddlers. The prices included under the heading "weighted average of all business" are weighted averages of the total amount received for each size of coal sold to all classes of trade during a given month, as distinguished from the typical prices. These weighted average prices could be obtained in the cases of only two retailers (Nos. 1 and 2), and are not given in the following summary table but appear only in the detailed table (Table 48).

There are three typical prices for each class of business in each month. These prices represent the typical price of coal sold around the 5th, 15th, and 25th of each month, and appear in the detailed table.

The gross margins are thus the differences between the cost of coal alongside the retailers' pockets and the typical prices (or weighted prices) received for coal sold to the different classes of trade.

TABLE 47.—*New York City—Summary for 15 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit.
See pp. 150 to 158.]

[See Table 48 for detail by companies.]

1916	Broken.			Egg.			Stove.			Chestnut.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
SEPTEMBER.												
Cost price.....	\$4.60	\$4.75	\$4.66	\$5.03	\$5.21	\$5.08	\$5.27	\$5.46	\$5.31	\$5.30	\$5.62	\$5.32
Typical household sale price.....	6.60	7.20	.....	6.75	7.20	.....	6.95	7.50	.....	6.95	7.65	.....
Gross margin.....	1.91	2.60	.....	1.61	2.17	.....	1.68	2.17	.....	1.63	2.35	.....
Typical apartment house sale price.....	6.35	6.70	.....	6.45	7.20	.....	6.70	7.20	.....	6.70	7.75	.....
Gross margin.....	1.66	2.07	.....	1.38	2.14	.....	1.36	1.92	.....	1.38	2.45	.....
Typical yard sale price.....	5.55	6.75	.....	6.05	6.75	.....	6.10	7.02	.....	6.10	7.00	.....
Gross margin.....	.95	2.10	.....	.91	1.70	.....	.83	1.72	.....	.80	1.70	.....
OCTOBER.												
Cost price.....	4.63	5.03	4.79	5.08	6.04	5.27	5.30	6.16	5.48	5.30	5.87	5.54
Typical household sale price.....	6.60	9.50	.....	6.95	8.25	.....	6.95	7.92	.....	6.95	8.40	.....
Gross margin.....	1.89	4.47	.....	.91	3.02	.....	.99	2.48	.....	1.34	2.62	.....
Typical apartment house sale price.....	6.35	8.50	.....	6.70	8.50	.....	6.70	8.50	.....	6.70	8.50	.....
Gross margin.....	1.49	3.64	.....	.75	3.28	.....	.80	2.97	.....	1.13	2.95	.....
Typical yard sale price.....	5.55	7.00	.....	6.05	8.00	.....	6.30	8.00	.....	6.35	8.00	.....
Gross margin.....	.87	2.28	.....	.84	2.63	.....	.71	2.26	.....	.77	2.39	.....
NOVEMBER.												
Cost price.....	4.64	4.97	4.78	5.16	7.10	5.89	5.39	8.00	6.32	5.30	6.47	6.18
Typical household sale price.....	6.70	9.50	.....	7.75	12.25	.....	7.75	11.00	.....	7.50	12.00	.....
Gross margin.....	2.06	4.78	.....	.79	5.90	.....	.75	4.55	.....	1.74	5.53	.....
Typical apartment house sale price.....	6.45	9.50	.....	7.50	12.25	.....	7.65	11.00	.....	7.25	12.00	.....
Gross margin.....	1.48	4.78	.....	.79	5.90	.....	.50	4.55	.....	1.74	5.53	.....
Typical yard sale price.....	5.55	9.00	.....	7.01	9.00	.....	7.25	9.00	.....	7.25	8.75	.....
Gross margin.....	.85	4.27	.....	.29	2.96	.....	.54	2.61	.....	1.24	2.74	.....
DECEMBER.												
Cost price.....	4.68	6.25	4.81	5.14	6.55	5.81	5.34	7.09	6.10	5.38	6.37	5.92
Typical household sale price.....	7.32	9.00	.....	7.75	9.00	.....	7.73	9.00	.....	7.75	9.00	.....
Gross margin.....	1.50	4.30	.....	1.36	3.63	.....	.66	3.35	.....	1.53	3.38	.....
Typical apartment house sale price.....	7.50	8.50	.....	7.69	9.00	.....	7.48	9.00	.....	7.00	9.00	.....
Gross margin.....	1.50	3.82	.....	1.23	3.23	.....	.66	3.16	.....	1.53	3.07	.....
Typical yard sale price.....	6.00	9.00	.....	6.50	8.25	.....	6.73	8.50	.....	7.00	8.50	.....
Gross margin.....	1.30	4.30	.....	1.12	2.88	.....	1.11	2.84	.....	1.15	2.88	.....

TABLE 47.—*New York City—Summary for 15 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September — December, 1916—Continued.*

1916	Pea.			Buckwheat No. 1.			Buckwheat No. 2.			Buckwheat No. 3.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
SEPTEMBER.												
Cost price.....	\$3.67	\$3.84	\$3.70	\$2.67	\$2.99	\$2.71	\$2.15	\$2.54	\$2.37	\$2.10	\$2.10	\$2.10
Typical household sale price.....	5.00	5.85	.....	3.90	3.90	.....	3.50	3.50	.....	3.15	3.15	.....
Gross margin.....	1.23	2.17	.....	.96	.96	.....	.96	.96	.....	1.05	1.05	.....
Typical apartment house sale price.....	4.93	5.25	.....	3.80	4.40	.....	3.20	3.50	.....	3.15	3.15	.....
Gross margin.....	1.16	1.57	.....	.96	1.65	.....	.83	1.23	.....	1.05	1.05	.....
Typical yard sale price.....	4.50	5.35	.....	3.40	3.65	.....	3.00	3.00	.....	.....	.....	.....
Gross margin.....	.73	1.67	.....	.58	.90	.....	.85	.85	.....	.....	.....	.....
OCTOBER.												
Cost price.....	3.52	3.85	3.72	2.65	2.97	2.71	2.15	2.55	2.42	2.09	2.09	2.09
Typical household sale price.....	5.00	5.85	.....	3.90	3.90	.....	3.50	3.50	.....	3.15	3.15	.....
Gross margin.....	1.24	2.33	.....	.93	.93	.....	.95	.95	.....	1.06	1.06	.....
Typical apartment house sale price.....	4.60	5.25	.....	3.48	5.50	.....	3.20	3.50	.....	3.15	3.15	.....
Gross margin.....	.84	1.73	.....	.58	2.74	.....	.79	1.27	.....	1.06	1.06	.....
Typical yard sale price.....	4.20	5.35	.....	3.65	3.65	.....	3.00	3.00	.....	.....	.....	.....
Gross margin.....	.35	1.83	.....	.91	.91	.....	.85	.85	.....	.....	.....	.....
NOVEMBER.												
Cost price.....	3.66	4.31	3.84	2.64	3.49	2.75	2.15	2.60	2.49	2.09	2.09	2.09
Typical household sale price.....	5.62	6.75	.....	3.90	4.90	.....	3.40	4.50	.....	3.15	3.15	.....
Gross margin.....	1.31	2.98	.....	.74	1.50	.....	.80	1.90	.....	1.06	1.06	.....
Typical apartment house sale price.....	5.00	6.75	.....	3.87	6.00	.....	3.19	4.50	.....	3.15	3.15	.....
Gross margin.....	.90	2.98	.....	.41	3.09	.....	.74	1.90	.....	1.06	1.06	.....
Typical yard sale price.....	4.50	6.00	.....	4.40	4.40	.....	3.00	3.00	.....	.....	.....	.....
Gross margin.....	.68	2.34	.....	1.63	1.66	.....	.85	.85	.....	.....	.....	.....
DECEMBER.												
Cost price.....	3.78	4.55	4.00	2.74	3.75	2.99	2.15	2.79	2.52	2.09	2.09	2.09
Typical household sale price.....	5.75	6.50	.....	4.30	4.75	.....	4.00	4.00	.....	3.15	3.15	.....
Gross margin.....	1.61	2.72	.....	.75	1.00	.....	1.21	1.21	.....	1.06	1.06	.....
Typical apartment house sale price.....	4.90	6.50	.....	3.48	5.60	.....	3.20	5.00	.....	3.15	3.15	.....
Gross margin.....	.70	2.72	.....	.52	2.62	.....	.80	2.21	.....	1.06	1.06	.....
Typical yard sale price.....	4.75	6.00	.....	4.40	4.50	.....	3.00	3.10	.....	.....	.....	.....
Gross margin.....	.45	2.22	.....	1.66	1.76	.....	.85	.95	.....	.....	.....	.....

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 47 for summary of this table.]

BROKEN COAL (COMPANIES 1 TO 8).

Retailer—	September.										October.									
	Cost price.	Class of business.						Weighted average of all business.		Cost price.	Class of business.						Weighted average of all business.			
		Household.			Contract.						Yard.									
		Household.		Gross margin.	Contract.		Gross margin.				Yard.		Gross margin.							
		Sale price.	Gross margin.		Sale price.	Gross margin.					Sale price.	Gross margin.								
No. 1.....	\$4.67	\$7.20	\$2.53		\$6.70	\$2.03		\$7.03	\$2.36	\$4.68	\$7.20	\$2.52		\$6.95	\$2.27	\$7.20	\$2.52			
No. 2.....	4.60	7.10	2.44		6.60	1.94			1.88	4.65	7.10	2.44		6.70	2.04	\$5.67	\$1.01			
No. 3.....	4.66	7.10	2.44		6.60	1.94				4.66	7.20	2.54		6.70	2.04					
		7.10	2.44		6.45	1.79					7.50	2.84		6.70	2.04					
No. 4.....	4.60	7.20	2.60		6.45	1.85	\$5.55	\$0.95			7.20	2.52		6.45	1.77	5.55	.87			
		7.20	2.60		6.45	1.85	5.55	.95		4.68	7.20	2.52		6.45	1.77	5.55	.87			
		7.20	2.60		6.45	1.85	5.55	.95			7.20	2.52		6.45	2.07	6.45	1.82			
No. 5.....	4.63	6.95	2.32		6.70	2.07	6.45	1.82		4.63	6.95	2.32		6.70	2.07	6.45	1.82			
		6.95	2.32		6.70	2.07	6.45	1.82			7.25	2.62		6.75	2.12	6.75	2.12			
		6.95	2.32		6.70	2.07	6.45	1.82			6.95	1.99		6.45	1.49					
No. 6.....	4.60									4.96				6.45	1.49					
											7.50	2.54		6.45	1.49					
					6.45	1.81								6.45	1.71					
No. 7.....	4.64				6.45	1.81				4.74				6.45	1.71					
					6.45	1.81								6.45	1.71					
					6.70	2.07								7.00	2.26					
No. 8.....	4.63	7.20	2.57		6.70	2.07				4.64	7.20	2.56		6.70	2.06	7.20	2.56			
		7.20	2.57		6.70	2.07					7.20	2.56		6.70	2.06	7.20	2.56			
		7.20	2.57		6.70	2.07					7.20	2.56		6.70	2.06	7.20	2.56			

	November.										December.				
	\$4.71	\$8.75	\$4.04	\$8.00	\$3.29	.....	\$8.14	\$3.43	\$4.72	\$8.75	\$4.03	\$8.00	\$3.28	.....	\$8.01
No. 1.....	4.66	8.00	3.33	7.75	3.08	.....	7.97	3.31	4.69	8.00	3.30	7.75	3.05	.....	7.66
No. 2.....	4.67	8.00	3.33	7.75	3.08	.....	.....	.....	4.70	8.00	3.30	7.75	3.05	.....	.....
No. 3.....	.....	8.00	3.33	7.75	3.08	.....	.....	.....	.....	8.00	3.30	7.75	3.05	.....	.....
No. 4.....	4.70	7.20	2.90	6.45	1.75	.....	.....	.....	4.70	7.75	3.05	8.50	3.80	4.30	.....
	.....	7.20	2.90	6.45	1.75	.....	.....	.....	.....	8.00	3.30	7.75	3.05	4.30	.....
No. 5.....	4.65	7.20	2.90	8.50	3.80	.....	.....	.....	.....	9.00	4.30	8.50	3.80	4.30	.....
	.....	7.75	3.10	7.75	3.10	.....	.....	.....	4.68	8.25	3.57	8.25	3.57	3.07	.....
No. 6.....	.....	9.25	4.60	9.25	4.60	.....	.....	.....	.....	7.75	3.07	7.75	3.07	2.57	.....
	.....	8.50	3.85	8.50	3.85	.....	.....	.....	.....	8.50	3.82	8.50	3.82	3.32	.....
No. 7.....	4.82	7.75	2.93	7.75	2.93	.....	.....	.....	4.86	7.50	2.64	7.50	2.64	.....	.....
	.....	8.25	3.43	8.25	3.43	.....	.....	.....	.....	7.75	2.99	7.75	2.89	.....	.....
No. 8.....	4.74	.....	.....	8.00	3.25	.....	.....	.....	.....	8.50	3.64	8.50	3.64	.....	.....
	.....	.....	.....	9.50	4.75	.....	.....	.....	4.72	8.50	.....	8.50	3.78	.....	.....
No. 8.....	4.64	8.36	3.72	7.57	2.93	.....	.....	.....	.....	.....	.....	7.70	3.02	.....	.....
	.....	6.70	2.07	7.60	2.93	.....	.....	.....	4.68	7.83	3.15	7.82	3.14	.....	.....
.....	.....	8.11	3.47	7.60	2.96	.....	.....	.....	.....	8.09	3.41	7.86	3.18	.....	.....

November.										December.								
	\$4.71	{ \$9.25 8.75 8.75	\$4.54 4.04 4.04	{ \$6.45 8.50 8.50	\$1.74 3.79 3.79	{ \$7.50 7.50 7.50	{ \$2.79 2.79 2.79				{ \$4.75	{ \$8.25 7.75 8.50	{ \$3.50 3.00 3.75	{ \$7.75 7.75 8.50	{ \$3.00 3.00 3.75	{ \$7.00 7.00 7.50	{ \$2.25 2.25 2.75	
No. 9.....																		
No. 10.....	4.67										4.77							
No. 11.....	4.72										6.25							
No. 12.....	4.83										4.79							
No. 13.....	4.97										4.85							
No. 14.....	4.73										4.75							
No. 15.....	4.77										4.76							
Minimum.....	4.64										4.68							
Maximum.....	4.97										6.25							
Weighted average.....	4.78										4.81							

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September—December, 1916—Continued.*

EGG COAL (COMPANIES 1 TO 8).

Retailer—	September.										October.					
	Class of business.										Class of business.					
	Cost price.	Household.			Contract.			Yard.			Household.			Contract.		
		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.	Weighted average of all business.
No. 1.....	\$5.03	\$7.20	\$2.17	\$6.95	\$1.92						\$7.40	\$2.31	\$6.95	\$1.86		\$7.13
No. 2.....	5.05	7.20	2.14	6.95	1.89	\$6.51	\$1.45				7.20	2.00	6.95	1.75	\$6.85	\$2.04
No. 3.....	5.06	7.20	2.14	6.95	1.89						7.20	2.00	6.95	1.75		1.82
No. 4.....	5.09	7.20	2.11	6.70	1.61	6.50	1.41				7.20	2.06	6.70	1.56	6.50	
No. 5.....	5.11	7.20	2.11	6.70	1.61	6.50	1.41				7.20	2.06	6.70	1.56	6.50	
No. 6.....	5.05	7.20	2.09	6.95	1.84	6.70	1.59				7.20	1.70	6.95	1.45	6.70	
No. 7.....	5.07	7.20	2.00	6.95	1.84	6.70	1.59				7.20	2.00	7.25	1.75	7.00	
No. 8.....	5.03	7.20	2.00	6.95	1.84	6.70	1.59				7.20	2.00	7.25	1.75		
		6.95	1.80	6.45	1.40						6.95	1.25	6.70	1.00		
		6.95	1.90	6.70	1.65						6.95	1.25	6.70	1.00		
		6.95	1.88	6.45	1.38						6.95	1.80	6.70	1.25		
		6.95	1.88	6.45	1.38						7.25	1.80	6.70	1.80		
		7.20	2.14	6.95	1.89						7.20	2.12	6.95	1.87		
		7.20	2.14	6.95	1.89						7.20	2.12	6.95	1.87		

	November.										December.				
	\$5.16	\$8.75	\$3.59	\$8.00	\$2.84	\$7.01	\$1.82	\$8.03	\$2.87	\$5.17	\$8.75	\$3.58	\$8.00	\$2.85	\$6.50
No. 1.....	5.69	8.00	2.81	7.75	2.56			8.23	2.54	5.50	8.00	2.84	7.75	2.59	\$1.34
No. 2.....	5.19	8.00	2.81	7.75	2.56					5.16	8.00	2.84	7.75	2.59	
No. 3.....		8.00	2.81	7.75	2.56						8.00	2.84	7.75	2.59	
No. 4.....	5.17	9.50	4.33	9.50	4.33	7.75	2.58			5.37	8.75	3.38	7.75	2.38	8.00
		8.50	3.33	8.50	3.33	7.75	2.58				9.00	3.63	8.50	2.38	8.00
		8.50	3.33	8.50	3.33	7.75	2.58				9.00	3.63	8.50	2.38	8.00
No. 5.....	6.96	7.75	2.79	7.75	2.79	7.25	1.79			5.80	8.25	2.45	8.25	2.45	7.75
		9.25	2.29	9.25	2.29	8.75	1.79				7.75	1.95	7.75	1.95	8.00
		8.50	1.84	8.50	1.84	8.00	1.04				8.50	2.70	8.50	2.70	8.00
No. 6.....	5.44	9.50	4.06	9.50	4.06					5.55	8.25	2.70	8.25	2.70	
		8.50	3.06	8.50	3.06						7.75	2.90	7.75	2.90	
		8.50	3.06	8.50	3.06						8.25	2.90	8.25	2.90	
No. 7.....	5.78	9.25	3.47	9.25	3.47					5.60	7.75	2.15	7.75	2.15	
		8.50	2.72	8.50	2.72						8.50	2.80	8.50	2.80	
		8.50	2.72	8.50	2.72						8.50	2.80	8.50	2.80	
No. 8.....	5.96	8.83	2.87	8.19	2.23					5.45	7.75	2.55	7.75	2.55	
		9.19	3.23	8.57	2.61						8.25	2.30	8.25	2.30	
		8.40	2.44	8.12	2.16						8.25	2.34	8.25	2.34	

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916—Continued.*

EGG COAL (COMPANIES 9 TO 15).

Retailer—	September.										October.									
	Cost price.	Class of business.						Weighted average of all business.		Cost price.	Class of business.						Weighted average of all business.			
		Household.			Contract.			Yard.			Household.			Contract.			Yard.			
		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.			Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.	
No. 9.....	5.14	\$6.85 6.75 6.75	\$1.71 1.61 1.61	\$6.60 6.70 6.70	\$1.46 1.56 1.56	\$6.05 6.05 6.05	\$0.91 .91 .91		\$5.21	\$7.20 7.20 6.95	\$1.99 1.99 2.04	\$6.70 6.70 6.83	\$1.49 1.49 1.49	\$6.05 6.05 6.05	\$0.84 .84 .84					
No. 10.....	5.06								6.04	7.20 7.20 6.95	1.16 1.06 1.31	6.79 6.79 6.70	.75 .75 1.89							
No. 11.....	5.15	6.95 6.95 6.95	1.80 1.80 1.80		1.55 1.55 1.55	6.70 6.70 6.70			5.64	6.95 6.95 6.95	1.31 1.31 2.24	6.70 6.70 6.70	1.06 1.06 2.11							
No. 12.....	5.21	7.00 7.00 7.00	1.79 1.79 1.79		1.49 1.49 1.49	6.70 6.70 6.70			5.22	7.20 7.03 7.83	1.98 1.81 2.61	6.87 6.97 8.50	1.65 1.75 3.28							
No. 13.....	5.10	7.20 7.20 7.20	2.10 2.10 2.10		1.60 1.60 1.60	6.70 6.70 6.70			5.25	7.25 7.25 7.50	2.00 2.00 2.25	6.70 6.70 6.70	1.45 1.45 1.45							
No. 14.....	5.05	6.95 6.95 6.95	1.90 1.90 1.90	6.10 6.10 6.75	1.65 1.65 1.65	6.70 6.70 6.70	1.05 1.05 1.70	6.10 6.10 6.75	5.37	6.95 7.50 7.50	1.58 2.13 2.13	6.70 6.70 7.50	1.33 1.33 2.13	6.75 6.45 8.00	1.38 1.08 2.63					
No. 15.....	5.09	6.95 6.95 6.95	1.86 1.86 1.86		1.61 1.61 1.61	6.70 6.70 6.70			5.23	6.95 8.25 8.25	1.72 3.02 3.02	6.70 6.70 6.70	1.47 1.47 2.52							
Minimum.....	5.03	6.75	1.61	6.05	1.38	6.45	.91	6.05	5.08	6.95	.91	6.70	.75	6.05	.84					
Maximum.....	5.21	7.20	2.17	6.75	2.14	7.20	1.70	6.75	6.04	8.25	3.02	8.50	3.28	8.00	2.63					
Weighted average.....	5.08								5.27											

	November.										December.				
No. 9.....	\$5.25	\$9.25	\$4.00	\$7.50	\$2.25	\$7.50	\$2.25	\$5.27	\$7.75	\$2.48	\$7.75	\$2.48	\$7.00	\$1.73	
		8.75	3.50	8.50	2.25	7.50	2.25		7.75	2.48	8.50	2.48	7.00	1.73	
		8.75	3.50	8.50	2.25	7.50	2.25		8.50	2.48	8.50	2.48	7.00	1.73	
No. 10.....	5.33	8.13	2.80	8.15	2.82			5.14	8.19	3.05	7.81	2.67			
		8.04	3.61	8.35	3.02				7.75	3.36	7.68	2.55			
		8.67	3.34	8.35	3.02				8.50	3.36	8.08	2.94			
No. 11.....	5.92	9.50	3.58	9.50	3.58			6.20	7.75	1.55	7.75	1.55			
		8.50	2.58	8.50	2.58				8.50	2.30	8.50	2.30			
		8.50	2.58	8.50	2.58				8.50	2.30	8.50	2.30			
No. 12.....	5.65	8.63	2.98	8.50	2.85			6.52	7.88	1.36	7.75	1.23			
		8.30	2.85	8.50	2.85				8.25	1.73	8.30	1.98			
		12.25	3.90	12.25	3.90				8.50	2.06	8.50	1.98			
No. 13.....	6.35	9.50	3.15	9.50	3.15			6.55	8.50	1.95	8.50	1.95			
		8.75	2.40	8.75	2.40				9.00	2.45	9.00	2.45			
		9.50	3.46	9.50	3.46	9.00	2.96		8.75	2.62	8.50	2.37	7.25	1.12	
No. 14.....	6.04	9.50	3.46	8.50	2.46	8.25	2.21	6.13	7.75	1.62	7.75	1.62	7.25	1.12	
		8.75	2.71	8.50	2.46	8.25	2.21		8.75	2.62	8.50	2.37	8.25	2.12	
		9.50	2.40	9.50	2.40				8.00	1.62	7.75	1.37			
No. 15.....	7.10	8.75	1.65	8.50	1.40			6.38	7.75	1.37	7.75	1.37			
		8.75	1.65	8.50	1.40				8.50	2.12	8.50	2.12			
Minimum.....	5.16	7.75	.79	7.50	.79	7.01	.29	5.14	7.75	1.36	7.69	1.23	6.50	1.12	
Maximum.....	7.10	12.25	5.90	12.25	5.90	9.00	2.96	6.55	9.00	3.63	9.00	3.23	8.25	2.88	
Weighted average.....	5.89							5.81							

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916—Continued.*

STOVE COAL (COMPANIES 1 TO 8).

Retailer—	September.										October.					
	Class of business.										Class of business.					
	Household.		Contract.		Yard.		Weighted average of all business.				Household.		Contract.		Yard.	
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$5.29	\$7.45	\$2.16	\$7.20	\$1.91					\$5.34	\$7.75	\$2.41	\$7.20	\$1.86		
No. 2.....	5.27	7.45	2.15	7.20	1.90					5.39	7.45	1.85	7.20	1.60		
No. 3.....	5.30	7.45	2.15	7.20	1.90					5.60	7.45	1.85	7.20	1.60	\$1.09	
No. 4.....	5.39	7.45	2.15	7.20	1.90						7.50	1.90	7.20	1.60		
		7.10	1.71	6.85	1.46						7.20	1.79	6.95	1.54	6.50	1.09
		7.20	1.81	6.95	1.56					5.41	7.20	2.09	6.95	1.54	6.30	.89
		7.20	1.81	6.95	1.56						7.55	1.80	7.20	1.55	6.95	1.30
No. 5.....	5.40	7.45	2.05	7.20	1.80					5.65	7.45	1.80	7.20	1.55	6.95	1.30
		7.45	2.05	7.20	1.80						7.45	1.80	7.20	1.55	6.95	1.30
		7.45	2.05	7.20	1.80						7.75	2.10	7.50	1.85	7.25	1.60
No. 6.....	5.31	7.10	1.79	6.95	1.64					5.91	7.20	1.29	6.95	1.04		
		7.20	1.89	6.95	1.64						7.20	1.29	6.95	1.04		
		7.20	1.89	6.70	1.39						7.50	1.59	6.95	1.04		
		7.20	1.89	6.95	1.64						7.20	1.49	6.95	1.24		
No. 7.....	5.31	7.20	1.89	6.95	1.64					5.71	7.50	1.79	6.95	1.24		
		7.20	1.89	6.95	1.64						7.50	1.79	6.95	1.24		
		7.45	2.17	7.20	1.92						7.45	2.15	7.20	1.90		
No. 8.....	5.28	7.45	2.17	7.20	1.92					5.30	7.45	2.15	7.20	1.90		
		7.45	2.17	7.20	1.92						7.45	2.15	7.20	1.90		

November.										December.									
No. 1.....	\$5.39	\$8.75	\$3.36	\$8.00	\$2.61						\$5.40	\$8.75	\$3.35	\$8.00	\$2.60			\$8.03	\$2.63
No. 2.....	6.15	8.25	2.78	7.75	2.28	1 \$7.25	\$1.78				5.96	8.00	2.60	7.75	2.35			7.74	1.78
No. 3.....	5.47	8.00	2.53	7.75	2.28						5.40	8.00	2.60	7.75	2.35	1 \$6.73	\$1.33		
No. 4.....	5.41	9.00	3.59	9.00	3.59	7.50	2.09				5.34	7.75	2.41	7.75	2.41	7.00	1.66		
No. 5.....	6.71	8.75	3.34	8.50	3.09	7.50	2.09				6.03	8.50	3.16	8.50	3.16	7.50	2.16		
No. 6.....	5.77	9.25	1.04	8.50	3.09	7.25	.54					8.25	2.22	8.25	2.22	7.75	1.72		
No. 7.....	6.46	9.25	2.54	9.25	2.54	8.75	2.04					7.75	1.72	7.75	1.72	8.00	1.97		
No. 8.....	6.12	8.50	1.79	8.50	1.79	8.00	1.29				6.10	8.25	2.47	8.50	2.47				
		9.25	3.48	9.25	3.48							7.75	1.65	8.25	2.15				
		8.25	2.48	9.25	3.48							8.50	2.40	8.50	2.40				
		9.25	2.79	9.25	2.79						6.09	7.75	2.41	7.75	2.41				
		9.25	2.79	9.25	2.79							8.50	2.41	8.50	2.41				
		9.50	3.38	9.50	1.53						5.48	8.08	2.60	8.50	2.45				
		9.00	2.88	8.24	2.12							8.25	2.77	7.92	2.45				
		8.44	2.32	7.95	1.83							8.50	3.02	8.09	2.61				

* Sold at a higher price, but a refund subsequently made reduces the price to figure here given.

1 Wholesale.

TABLE 48.—New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September—December, 1916—Continued.

STOVE COAL (COMPANIES 8 9 TO 15).

Retailer—	September.										October.									
	Cost price.	Class of business.						Weighted average of all business.	Cost price.	Class of business.						Weighted average of all business.				
		Household.			Contract.					Household.			Contract.							
		Yard.		Gross margin.	Yard.		Gross margin.			Household.		Gross margin.	Contract.		Gross margin.					
		Sale price.	Gross margin.		Sale price.	Gross margin.				Sale price.	Gross margin.		Sale price.	Gross margin.						
No. 9.....	\$5.34	\$7.50	\$2.16	\$6.70	\$1.36	\$6.75	\$1.41	\$5.38	\$7.50	\$2.12	\$6.70	\$1.32	\$6.75	\$1.37						
No. 10.....	5.29	7.50	2.16	6.70	1.36	6.75	1.41	6.16	7.15	.99	6.96	.80	6.75	1.37						
No. 11.....	5.32	7.20	1.88	6.95	1.63			5.40	7.20	1.80	6.95	1.55								
No. 12.....	5.46	7.20	1.74	6.90	1.44			5.53	7.28	1.75	6.95	1.42								
No. 13.....	5.35	7.45	2.10	6.95	1.60			5.73	7.45	1.72	6.95	1.22								
No. 14.....	5.27	6.95	1.68	6.95	1.68	6.10	.83	5.74	6.95	1.21	6.95	1.21	6.75	1.01						
No. 15.....	5.35	7.20	1.85	6.95	1.60	6.75	1.48		7.50	1.76	7.50	1.76	8.00	2.25						
Minimum.....	5.27	6.95	1.68	6.70	1.36	6.10	.83	5.41	7.20	1.79	6.95	1.54								
Maximum.....	5.46	7.50	2.17	7.20	1.92	7.02	1.72	5.80	7.92	2.48	8.50	2.97	8.00	2.26	.71					
Weighted average.....	5.31							5.48												

	November.							December.										
	\$9.50	\$4.11	\$9.50	\$4.11	\$8.00	\$2.61							\$9.00	\$3.34	\$7.75	\$2.09	\$7.50	\$1.84
No. 9.....	8.50	3.11	9.50	4.11	8.00	2.61							8.75	3.09	7.75	2.09	7.00	1.34
	8.50	3.11	8.50	3.11	8.00	2.61							9.00	3.34	8.50	2.84	8.50	2.84
No. 10.....	8.69	3.10	8.33	2.74									8.33	2.96	8.00	2.63		
	8.75	3.16	7.71	2.12									7.85	2.48	7.70	2.53		
	8.67	3.08	8.23	2.64									8.60	3.23	8.17	2.80		
No. 11.....	9.50	3.88	9.50	3.88									7.75	1.63	7.75	1.63		
	8.50	2.88	8.50	2.88									8.50	2.38	8.50	2.38		
	9.50	3.87	9.50	3.87									8.50	2.38				
No. 12.....	8.58	2.95	8.50	2.87									7.73	1.17	7.48	.92		
	11.00	4.55	11.00	4.55									8.08	1.52	8.50	1.94		
	9.00	2.55	9.00	2.55									8.25	1.69	8.50	2.20		
No. 13.....	9.00	2.55	9.00	2.55									8.50	2.20	8.50	2.20		
	9.50	2.70	9.50	2.70									9.00	2.70	9.00	2.70		
	9.50	2.70	9.50	2.70									8.75	2.61	8.50	2.36		
No. 14.....	8.50	2.70	8.50	1.70	8.25	1.45							7.75	1.61	7.75	1.61	7.25	1.11
	8.75	1.95	8.50	1.70	8.25	1.45							8.75	2.61	8.50	2.36	8.25	2.11
	9.50	1.50	9.50	1.50									8.00	.91	7.75	.66		
No. 15.....	8.75	.75	8.50	.50									7.75	.66	7.75	.66		
	8.75	.75	8.50	.50									8.50	1.41	8.50	1.41		
Minimum.....	8.75	.75	8.50	.50	7.25	.54							8.50	.66	7.48	.66	6.73	1.11
Maximum.....	7.75	.75	7.65	.50									7.73	.66	7.48	.66	6.73	1.11
Weighted average.....	11.00	4.55	11.00	4.55	9.00	2.61							9.00	3.35	9.00	3.16	8.50	2.84
	6.32																	

November.										December.									
No. 1.	\$5.40	\$8.75	\$3.35	\$7.50	\$2.10					\$8.27	\$2.87	\$5.42	\$8.75	\$3.33	\$8.00	\$2.58			
No. 2.	6.20	8.00	2.55	7.75	2.30	1 \$7.75	\$2.30			7.77	1.57	5.85	8.00	2.55	7.75	2.30	1 \$7.25	\$1.80	\$2.03
No. 3.	5.45	8.00	2.55	7.75	2.30							5.45	8.00	2.55	7.75	2.30			1.69
No. 4.	5.55	8.75	3.70	9.50	3.95	7.50	1.95					5.54	7.75	2.21	8.50	2.96	7.00	1.46	
No. 5.	6.01	8.75	3.20	8.50	2.95	7.50	1.95						8.50	2.96	7.75	2.21	7.50	1.96	
		7.75	1.74	7.75	1.74	7.25	1.24					5.67	8.25	2.58	8.50	2.96	7.75	2.08	
		9.25	3.24	9.25	3.24	8.75	2.74						7.75	2.08	7.75	2.08	7.25	1.58	
No. 6.	5.72	8.50	2.49	8.50	2.49	8.00	1.99						8.50	2.83	8.50	2.83	8.00	2.33	
		9.50	3.78	9.50	3.78							6.22	7.75	1.53	7.75	1.53			
		7.50	1.78	7.50	1.78								8.00	1.78	8.00	1.78			
No. 7.	5.81	9.25	3.44	9.25	3.44								8.50	2.78	8.50	2.78			
		9.25	3.44	9.25	3.44							5.72	7.75	2.03	7.75	2.03			
													8.50	2.78	8.50	2.78			
No. 8.	5.30	9.50	4.20	9.50	4.20							5.41	7.83	2.42	8.00	2.59			
		8.31	3.01	7.25	1.95								8.65	3.24	7.00	1.59			

¹ Wholesale.² Sold at a higher price, but a refund subsequently made reduces the price to figure here given.

TABLE 48.—New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September—December, 1916—Continued.

CHESTNUT COAL (COMPANIES 9 TO 15).

Retailer—	September.										October.											
	Cost price.	Class of business.						Weighted average of all business.				Cost price.	Class of business.						Weighted average of all business.			
		Household.			Contract.			Yard.		Household.	Contract.		Yard.		Household.	Contract.		Yard.				
		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.				Sale price.	Gross margin.			Sale price.	Gross margin.		Sale price.	Gross margin.	
No. 9.....	\$5.30	\$7.50 7.50	\$2.20 2.20	1.40 1.40	\$6.70 6.70	\$6.75 6.75	1.45 1.45			\$5.38	\$7.50 7.50	\$2.12 2.12	1.32 1.32	\$6.70 6.70	\$6.75 6.75	1.37 1.37						
No. 10.....	5.30				6.90 6.90	6.90 6.90				5.30	7.13 7.13	1.83 1.83	2.08 2.08	7.38 7.38	1.86 1.86							
No. 11.....	5.30	7.25 7.25	1.95 1.95	1.70 1.70	7.00 7.00	7.00 7.00				5.47	7.25 7.25	1.78 2.41	1.53 2.28	7.00 7.75	1.53 2.41	7.00 7.75						
No. 12.....	5.62	7.25 7.50	1.93 1.88	1.38 1.38	7.00 7.00	7.00 7.00				5.55	7.35 8.00	1.80 2.45	1.45 2.95	7.00 8.50	1.45 2.95	7.00 8.50						
No. 13.....	5.38	7.50 7.50	2.12 2.12	1.62 1.62	7.00 7.00	7.00 7.00				5.85	7.75 7.75	1.90 1.90	1.65 1.65	7.50 7.50	1.65 1.65	7.50 7.50						
No. 14.....	5.30	6.95 6.95	1.65 1.65	1.70 1.70	7.00 7.00	6.10 6.75	.80 1.45			5.61	6.95 7.50	1.34 1.89	1.39 1.89	7.00 7.50	1.39 1.89	6.75 8.00	1.14 2.39					
No. 15.....	5.37	7.25 7.25	1.88 1.88	1.63 1.63	7.00 7.00	7.00 7.00				5.87	7.25 8.40	1.38 2.53	1.13 1.13	7.00 7.50	1.13 1.63	7.00 7.50						
Minimum.....	5.30	6.95	1.63	1.38	6.70	6.10	.80			5.30	6.95	1.34	1.34	8.50	1.13	6.35	.77					
Maximum.....	5.62	7.65	2.35	1.75	7.75	7.00	1.70			5.87	8.40	2.62	2.95	8.50	2.95	8.00	2.39					
Weighted average.....	5.32									5.54												

		November.					December.					
No. 9.	\$5.44	\$30.50	\$4.06	\$8.00	\$2.56		\$9.00	\$3.38	\$7.75	\$2.13	\$7.50	\$1.88
		8.50	4.06	8.00	2.56		8.75	3.13	7.75	2.13	7.00	1.38
		9.75	3.06	8.00	2.56		9.00	3.38	8.50	2.37	8.50	2.88
No. 10.	5.54	8.63	3.09	8.75	2.38		7.88	2.50	7.68	2.25		
		8.75	3.21	8.75	3.21				8.08	2.70		
No. 11.	5.46	9.50	4.04	8.50	3.07		7.75	2.32	7.75	2.32		
		8.50	3.04	8.50	3.04		8.50	3.07	8.50	3.07		
No. 12.	5.85	9.50	3.65	8.50	3.65		7.75	1.99	8.50	1.99		
		8.63	2.78	8.50	2.65		8.25	2.49	8.50	2.74		
No. 13.	6.47	12.00	5.53	9.00	5.53		8.63	2.87	8.50	2.74		
		9.00	2.53	9.00	2.53		8.50	2.13	8.50	2.13		
No. 14.	6.39	9.50	3.11	8.75	3.11		8.75	2.38	8.75	2.38		
		8.75	2.36	8.75	2.36		9.00	2.63	9.00	2.63		
No. 15.	6.13	9.50	3.37	8.50	3.37		8.75	2.65	8.50	2.40	7.25	1.15
		8.75	2.62	8.50	2.62		7.75	1.65	7.75	1.65	7.25	1.15
Minimum.	5.30	7.50	1.74	7.25	1.24		8.00	1.96	8.50	2.40	8.25	2.15
Maximum.	6.47	12.00	5.53	8.75	2.74		7.75	2.71	7.75	1.71		
Weighted average.	6.18						8.75	1.53	7.00	2.46		
							9.00	3.38	9.00	3.07	8.50	2.88

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916—Continued.*

PEA COAL (COMPANIES 1 TO 8).

Retailer—	September.										October.					
	Class of business.										Class of business.					
	Cost price.	Household.			Contract.			Yard.			Household.			Contract.		
		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.	Weighted average of all business.
No. 1.....	\$3.70	\$5.85	\$2.15		\$1.30						\$5.85	\$2.15		\$5.00	\$1.30	\$5.19
No. 2.....	3.67	5.15	1.44	5.15	1.44						5.25	1.53		5.25		4.88
No. 3.....	3.71	5.25	1.54	5.25	1.54			\$4.90			5.25	1.53		5.25		
		5.00	1.23	5.00	1.23			4.75			5.50	1.78		5.25	\$5.00	
No. 4.....	3.77	5.00	1.23	5.00	1.23			4.50	.98		5.00	1.24		5.00	1.24	
		5.00	1.23	5.00	1.23			4.50	.73		5.00	1.24		5.00	1.24	
No. 5.....	3.68	5.85	2.17	5.25	1.57			5.35	1.67		5.85	2.33		5.25		
		5.85	2.17	5.25	1.57			5.35	1.67		5.85	2.33		5.25		
		5.85	2.17	5.25	1.57			5.35	1.67		5.85	2.33		5.25		
No. 6.....	3.84			5.00	1.16									1.30		
				5.00	1.16									1.30		
				5.00	1.16									1.30		
No. 7.....	3.67	5.00	1.33	5.00	1.33						5.60	1.94		5.00		
		5.60	1.33	5.00	1.33						5.60	1.94		5.00		
		5.60	1.33	5.00	1.33						5.60	1.94		5.00		
No. 8.....	3.75	5.85	2.10	5.13	1.38						5.85	2.06		5.13		
		5.85	2.10	5.13	1.38						5.85	2.06		5.13		
		5.85	2.10	5.13	1.38						5.85	2.06		5.13		

	November.						December.					
	\$3.79	\$6.00	\$2.21	\$5.50	\$1.71		\$3.79	\$6.00	\$2.21	\$4.90	\$1.11	
No. 1.....	3.73	5.75	1.89	5.75	1.89		3.97	5.75	1.87	5.75	1.87	\$1.56
No. 2.....		5.75	1.89	5.75	1.89	\$5.52	3.88	5.75	1.87	5.75	1.87	1.41
No. 3.....		5.75	1.89	5.75	1.89	\$1.66		5.75	1.87	5.75	1.87	
		5.75	1.89	5.75	1.89			5.75	1.87	5.75	1.87	\$0.87
No. 4.....	3.82	6.00	2.18	5.00	1.18	4.50		6.00	2.12	5.50	1.62	
		6.00	2.18	5.00	1.18	4.50	3.88	6.00	2.12	5.50	1.62	.87
		6.00	2.18	5.00	1.18	4.75		6.00	2.12	5.50	1.62	1.37
No. 5.....	3.66	6.50	2.84	6.25	2.84	6.00		6.50	2.72	6.00	2.22	1.72
		6.50	2.84	6.25	2.84	5.75	3.78	6.50	2.72	6.50	1.97	1.43
		6.50	2.84	6.25	2.84	5.50		6.50	2.72	6.50	2.72	2.22
No. 6.....	3.95			6.25	2.30					6.00	2.05	
				6.25	2.30		3.95			6.00	2.05	
				6.00	2.05					6.00	2.05	
No. 7.....	3.77	6.75	2.98	6.75	2.98			6.00	2.14	6.00	2.14	
		6.00	2.23	6.00	2.23		3.86	6.00	2.14	6.00	2.14	
		6.00	2.23	6.00	2.23			6.00	2.14	6.00	2.14	
No. 8.....	4.06	6.50	2.44	5.86	1.80			6.25	2.30	5.50	1.55	
		6.50	2.44	5.70	1.64		3.95	6.13	2.18	5.38	1.43	
				5.82	1.76			6.50	2.55	5.78	1.83	

¹ During September and October retailer No. 6 had several contracts for sale of pea at \$4.40, on which his margins were \$0.56 and \$0.58, respectively.

[illegible]

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916—Continued.*

BUCKWHEAT NO. 1 (COMPANIES 2 TO 8).

Retailer—	September.										October.									
	Cost price.	Class of business.						Weighted average of all business.		Cost price.	Class of business.						Weighted average of all business.			
		Household.		Contract.		Yard.					Household.		Contract.		Yard.					
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.				
No. 2.....	\$2.67			\$3.90	\$1.07			\$3.79	\$1.12	\$2.65			\$3.90	\$1.07			\$3.78	\$1.13		
No. 3.....	2.83			3.90	1.07					2.83			3.90	1.07						
No. 4.....	2.80			3.90	1.10								3.90	1.10						
No. 5.....	2.75			3.90	1.10					2.80			3.90	1.10						
				3.90	1.10								3.90	1.10						
				4.40	1.65	\$3.65	\$0.90						4.40	1.66	\$3.65	\$0.91				
				4.40	1.65	3.65	.90			2.74			4.40	1.66	3.65	.91				
				4.40	1.65	3.65	.90						4.40	1.66	3.65	.91				
No. 6.....	2.76			3.80	1.04								3.90	1.08						
				3.90	1.14					2.82			3.90	1.08						
				3.90	1.14								3.85	1.03						
No. 7.....	2.86			3.90	1.04								3.90	1.14						
				3.90	1.04					2.76			4.15	1.39						
				3.90	1.04								5.50	2.74						
				3.90	1.11								3.90	1.12						
No. 8.....	2.79			3.90	1.11					2.78			3.90	1.12						
				3.90	1.11								3.90	1.12						

November.										December.									
No. 2.....	\$2.64																		
No. 3.....	2.85																		
No. 4.....	2.80																		
No. 5.....	2.74																		
No. 6.....	3.40																		
No. 7.....	2.91																		
No. 8.....	2.91																		

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916—Continued.*

[illegible]

	November.					December.				
No. 9.....	\$2.94	\$3.90	\$0.96			\$2.99	\$3.90	\$0.91		
		3.90	.96				3.90	.91		
		3.90	.96				4.50	1.51		
		4.01	1.04				3.96	.79		
No. 10.....	2.97	3.95	.98			3.11	4.50	1.39		
		3.87	.90				4.75	1.64		
		3.90	.41				4.50	1.23		
No. 11.....	3.49					3.27	4.50	1.23		
		4.38	.89				4.50	1.23		
		4.90	1.74				4.50	.97		
No. 12.....	3.16	\$3.90	\$0.74			3.53	\$0.77	4.50		
		4.10	.94				.77	.97		
		3.90	1.34				4.50	1.97		
			1.51					.52		
No. 13.....	2.99	4.50	1.51			2.96	3.48	.52		
		4.50	1.51				3.48	.52		
		3.90	.84				4.50	1.21		
No. 14.....	3.06	4.50	1.44			3.29	4.50	1.21		
		4.50	1.44				4.50	1.21		
		4.25	1.31				4.50	1.57		
		4.25	1.31				4.50	1.57		
No. 15.....	2.94	4.25	1.31			2.93	4.75	1.82		
		4.25	1.31				4.75	1.82		
Minimum.....	2.64	3.90	.74			2.74	4.30	.75	\$1.66	
Maximum.....	3.49	4.90	3.41			3.75	4.75	1.00	4.50	
Weighted average.....	2.75					2.99			1.76	

	November.					December.				
	\$3.35	\$1.20	\$3.00	\$0.85		\$3.35	\$1.20	\$3.00	\$0.85	
No. 5.....	3.35	1.20	3.00	.85		3.35	1.20	3.00	.85	
	3.35	1.20	3.00	.85		3.35	1.20	3.10	.95	
No. 8.....	3.38	1.04				3.87	1.30			
	3.91	1.37				3.74	1.17			
	4.06	1.52				3.60	1.03			
No. 9.....	3.50	1.27				3.50	1.27			
	3.50	1.27				3.50	1.27			
	3.50	1.27				4.00	1.77			
No. 10.....	3.19	.74				3.25	.81			
	3.34	.89				3.43	.99			
	3.31	.86				3.56	1.12			
No. 12.....	4.50	1.90				4.00	1.21			
	4.00	1.40				1.21	4.00			
No. 13.....	4.00	1.40				1.21	5.00			
	3.20	.82				3.20	.80			
No. 14.....	3.50	1.13				4.00	1.63			
	3.50	1.13				4.00	1.63			
	4.00	1.63				4.00	1.63			
No. 15.....	3.60	1.13				4.15	1.68			
	3.60	1.13				4.15	1.68			
	3.60	1.13				4.15	1.68			
Minimum.....	3.60	1.13				4.40	1.93			
Maximum.....	3.19	.74	3.00	.85		4.40	.80	3.00	.85	
Weighted average.....	4.50	1.90	3.00	.85		5.00	2.21	3.10	.95	
	2.15	3.40				2.15	4.00			
	2.60	4.50				2.79	4.00			
	2.49					2.52				

TABLE 48.—*New York City—Retailers' cost prices, typical sale prices, and gross margins per net ton of white ash anthracite, by sizes, and by principal classes of business, for 15 representative dealers, September — December, 1916—Continued.*

BUCKWHEAT No. 3.

Retailer—	September.										October.									
	Class of business.										Class of business.									
	Cost price.	Household.		Contract.		Yard.		Weighted average of all business.	Cost price.	Household.		Contract.		Yard.		Weighted average of all business.				
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.					
No. 12.....	\$2.10	\$3.15	\$1.05	\$3.15	\$1.05				\$2.09	\$3.15	\$1.06	\$3.15	\$1.06							
Minimum.....	2.10	3.15	1.05	3.15	1.05				2.09	3.15	1.06	3.15	1.06							
Maximum.....	2.10	3.15	1.05	3.15	1.05				2.09	3.15	1.06	3.15	1.06							
Weighted average.....	2.10	3.15	1.05	3.15	1.05				2.09	3.15	1.06	3.15	1.06							
November.																				
No. 12.....	\$2.09	\$3.15	\$1.06	\$3.15	\$1.06				\$2.09	\$3.15	\$1.06	\$3.15	\$1.06							
Minimum.....	2.09	3.15	1.06	3.15	1.06				2.09	3.15	1.06	3.15	1.06							
Maximum.....	2.09	3.15	1.06	3.15	1.06				2.09	3.15	1.06	3.15	1.06							
Weighted average.....	2.09	3.15	1.06	3.15	1.06				2.09	3.15	1.06	3.15	1.06							
December.																				
No. 12.....	\$2.09	\$3.15	\$1.06	\$3.15	\$1.06				\$2.09	\$3.15	\$1.06	\$3.15	\$1.06							
Minimum.....	2.09	3.15	1.06	3.15	1.06				2.09	3.15	1.06	3.15	1.06							
Maximum.....	2.09	3.15	1.06	3.15	1.06				2.09	3.15	1.06	3.15	1.06							
Weighted average.....	2.09	3.15	1.06	3.15	1.06				2.09	3.15	1.06	3.15	1.06							

The New York retailers are accustomed to refer to their gross margins as the margins between the cost of coal f. o. b. vessels at New Jersey terminals and the sales prices. Accordingly it will be well to restate that the gross margins appearing in the table above are the differences between the cost of coal delivered alongside the retailers' yards and the sales prices. The item of water freights across the harbor normally amounts to about 20 cents per ton. In 1917 it has increased to about 35 cents per ton.

It appears from statements furnished by the New York retailers that the average gross margin (based on the cost of coal delivered alongside the retailers' yards) on prepared sizes in 1915 was \$1.50 to \$1.75 per net ton, and that on the steam sizes in 1915 was \$1 to \$1.25 per net ton.

Broken.—During September, 1916, the cost of broken coal to the 15 New York retailers covered in Table 48 ranged from \$4.60 to \$4.75 per net ton. The typical household sales prices ranged from \$6.60 to \$7.20. The gross margins on household sales varied from \$1.91 to \$2.60. The gross margins on apartment-house sales ranged from \$1.66 to \$2.07, while the gross margins on yard sales ranged from \$0.95 to \$2.10.

During October the average cost per net ton increased 13 cents. Individual gross margins on household sales varied considerably, ranging from \$1.89 to \$4.47. During November the gross margins on household sales ranged from \$2.06 to \$4.78, and during December from \$1.50 to \$4.30. Those on apartment house and hotel sales ranged from \$1.48 to \$4.78 in November and from \$1.50 to \$3.82 in December.

During the last three months of the year the purchase prices increased about 15 cents per ton, but the sales prices were increased about \$1.25 to \$1.50. It is apparent that only in the case of retailer No. 11 in December were the large increases in the sales prices justified on the basis of increases in the cost of broken coal.

Data as to the gross margins of the New York retailers on each size of coal during 1915 are not available at this time. For comparative purposes therefore it is necessary to assume that the margins for September, 1916, are normal and use these margins as bases upon which to determine to what extent advantage was taken of abnormal conditions by the New York retailers.

Egg.—The household sales prices of egg coal during September ranged from \$6.75 to \$7.20 per net ton. The gross margin ranged from \$1.61 to \$2.17. The gross margins on apartment-house sales ranged from \$1.38 to \$2.14, and those on yard sales from \$0.91 to \$1.70. During October the cost increased about 20 cents, while the household sales ranged from \$6.95 to \$8.25. During November the costs increased about 60 cents over October, while the individual gross margins on household and apartment-house sales ranged from \$0.79 to \$5.90. The margins on yard sales ranged from \$0.29 to \$2.96. Retailers Nos. 5 and 15 did not have unduly increased margins, but the remainder, especially retailers Nos. 1, 2, 4, 9, and 13 increased their margin considerably. During December the same situation

existed. In short, the retailers, with but the two exceptions noted, increased their gross margins on egg coal for all classes of business to an extent which can not be justified on the basis of increases in the purchase prices.

Stove.—The gross margins on household sales of stove coal during September ranged from \$1.68 to \$2.17 per net ton. Those on apartment house and yard sales ranged from \$1.36 to \$1.92, and from \$0.83 to \$1.72, respectively. During October the average costs increased about \$0.15 and the margins remained about the same as in September. During November the costs increased about 85 cents above those in October. The household sales prices ranged from \$7.75 (retailer No. 5) to \$11 (retailer No. 13), the gross margin ranging from \$0.75 (retailer No. 15) to \$4.55 (retailer No. 13). The apartment-house prices ranged from \$7.65 to \$11. During December the costs were a little below those in November, and the sales prices were reduced. The household sales prices ranged from \$7.73 (retailer No. 12) to \$9 (retailers Nos. 9 and 13), with margins varying from \$0.66 (retailer No. 15) to \$3.35 (retailer No. 1). The apartment-house sales prices ranged from \$7.48 (retailer No. 12) to \$9 (retailer No. 13), with margins varying from \$0.66 (retailer No. 15) to \$3.16 (retailer No. 4).

Chestnut.—The household sales prices of nut during September ranged from \$6.95 to \$7.65 per net ton, yielding gross margins varying from \$1.63 to \$2.35. The gross margins on apartment-house sales ranged from \$1.38 to \$2.45. During October the average costs increased about 25 cents per ton, while the sales prices remained about the same. In November the costs varied considerably, \$5.30 (retailer No. 8) being the minimum, and \$6.47 (retailer No. 13) the maximum. The household sales prices ranged from \$7.50 (retailer No. 6) to \$12 (retailer No. 13). The gross margin on this class of business varied from \$1.74 (retailer No. 5) to \$5.53 (retailer No. 13). During December the household sales prices ranged from \$7.75 (retailers Nos. 4, 5, 6, 7, 11, 12, 14, and 15) to \$9 (retailers Nos. 9 and 13), yielding gross margins ranging from \$1.53 (retailer No. 6) to \$3.38 (retailer No. 9). During November and December the apartment-house sales prices and corresponding gross margins were about the same as those of the household class.

Pea.—Apartment-house sales prices of pea coal in September ranged from \$4.93 to \$5.25, averaging about \$5 with corresponding margins of \$1.16 to \$1.57. During October the prices remained about the same as the greater part of the coal was sold under verbal contracts which had been made at a previous time. In November the prices ranged from \$5 to \$6.75, while the gross margins ranged from \$0.90 to \$2.98. During December the apartment-house sales prices ranged from \$4.90 to \$6.50, the margins ranging from \$0.70 (retailer No. 14) to \$2.72 (retailer No. 5).

Buckwheat.—The gross margins on buckwheat No. 1, rice, and barley do not show such wide variations as those on the prepared sizes. The average costs of buckwheat No. 1 for the last four months of 1916 were \$2.71, \$2.71, \$2.75, and \$2.99. The average costs for the last four months of 1916, of buckwheat No. 2, or rice, were \$2.37, \$2.42, \$2.49, and \$2.52.

BUFFALO.

Transportation.—Anthracite coal enters Buffalo principally over the following railroads: Delaware, Lackawanna & Western; Erie; Lehigh Valley; New York Central & Hudson River; and Pennsylvania.

The freight rate on anthracite from the mines to Buffalo is \$2 per gross ton on prepared sizes and \$1.75 per gross ton on pea coal and smaller. Buffalo is the dock port for coal shipped by water to Duluth, Milwaukee, and other western points. Nearly all anthracite destined via all-rail route for Chicago, Detroit, and the West normally passes through Buffalo, and prices are quoted f. o. b. Buffalo, though a large quantity was shipped in 1916 by way of Erie, Pa., instead of by Buffalo.

Sources of supply, and local distribution.—Normally, Buffalo burns little independent anthracite coal. The railroad coal companies or their affiliated sales companies or agents sell to six wholesale trestle operators, who in turn sell to retailers. Sales in carload lots to large consumers, mostly industrial, are handled by the trestle operators.

The railroad coal companies, arranged in alphabetical order, are represented as follows in Buffalo:

Delaware, Lackawanna & Western Coal Co., sales company for Delaware, Lackawanna & Western Railroad.

Dickson & Eddy, sales agents for Scranton Coal Co. (New York, Ontario & Western coal).

Lehigh Valley Coal Sales Co., sales company for Lehigh Valley Coal Co.

Millspaugh & Green, selling Delaware & Hudson coal.

Philadelphia & Reading Coal & Iron Co., branch sales office.

Williams & Peters, sales agents for Pennsylvania Coal Co. (Erie R. R.) and Hillside Coal & Iron Co. (Erie R. R.).

The largest wholesaler is the firm of E. L. Hedstrom, which leases six Delaware, Lackawanna & Western trestles and handles only Delaware, Lackawanna & Western coal. Spaulding & Spaulding lease six Erie Railroad, New York, Ontario & Western, and Delaware & Hudson trestles and own one trestle of their own. They operate only six at present. Their coal is purchased principally from Williams & Peters and Dickson & Eddy. Yates-Lehigh Coal Co. operates two Lehigh Valley trestles and handles all the Lehigh Valley Coal Sales Co.'s coal in Buffalo. James Ash (Inc.) owns its trestle and has depended largely upon Thorne, Neale & Co. (independent) for its supply, purchasing some coal also from Dickson & Eddy. The Philadelphia & Reading Coal & Iron Co. operates two wholesale trestles from its Buffalo branch sales office. The Eberl Coal Co., a wholesaler, buys all its coal from E. L. Hedstrom (Delaware, Lackawanna & Western coal).

Anthracite is sold from the trestles to retailers, and by retailers is meant all who buy coal at these trestles for delivery to the consumer at an advance over the price paid. The larger retailers, handling from about 3,000 to 15,000 net tons annually, are few in number, only about 20, as against a total of upward of 400 retailing coal in Buffalo. The 20 larger retailers probably handle somewhat more than 125,000 tons annually. They maintain a delivery system and usually

an office. As "recognized" retail coal merchants they make it their year-round business, while many, possibly most, of the smaller retailers use coal hauling as a means of filling in during dull periods in their carting, storage, or other business.

Spaulding & Spaulding, one of the large wholesale dealers, conduct a retail department and are perhaps the largest retailers in Buffalo. Another wholesale trestle operator who also retails coal is James Ash (Inc.). Besides these two, the following are among the larger Buffalo retailers: James Hanrahan, C. A. & M. Kaiser, Lehigh-Scranton Coal Co., H. S. Metz Coal Co., D. J. Stickney Coal Co., and Tracy Coal & Wood Co.

Large industrial contracts are handled principally by the wholesalers on account of their direct connection with carload supplies and on account of the fact that the retailers lack storage facilities. Municipal contracts are, however, in the hands of two of the retailers, one of whom handles little anthracite besides that sold to the municipal departments. The anthracite-coal demand for industrial consumption is, of course, not important as compared with the demand for bituminous, although one concern in Buffalo with large war contracts is shown to have increased its use of anthracite by 18,500 tons in 1916 as compared with 1915, and the demand in general was abnormal owing to the increased business of the past year.

The retail companies as a rule specialize, for business reasons, in certain company coal and are known as Delaware, Lackawanna & Western, or Philadelphia & Reading, or Lehigh Valley, or Erie dealers. For instance, three of the large retailers are known as Delaware, Lackawanna & Western dealers, while another handles principally Philadelphia & Reading coal, sold at the trestles operated by the Philadelphia & Reading Coal & Iron Co. A small dealer is also apt to establish regular dealings with one of the trestle companies, his choice often decided by nearness to a particular trestle. Extension of credit undoubtedly has some bearing upon the matter; and while semimonthly settlements are expected, it is undoubtedly true that some dealers are carried for longer periods by the wholesaler, which results in practically exclusive and permanent connections being established. A considerable number of the smaller dealers buy on a cash basis at the trestle.

To summarize, anthracite coal is distributed to the consumer in Buffalo through wholesalers, who respectively handle certain railroad or independent coal and sell to retail dealers, who, as a rule, handle a particular wholesaler's coal. There are 6 wholesalers and over 400 retailers, although only about 20 of the latter handle over 3,000 tons per year. One wholesaler alone has 400 dealers on his books; another has between 80 and 100. It is estimated that about 400 dealers of under 3,000 tons each average an annual business of only about 800 net tons.

Local consumption of anthracite.—The anthracite coal handled in 1916 by all wholesalers in Buffalo, including the carload business as well as trestle trade, totaled 521,388 net tons. Of this, about 450,000 net tons represented trestle sales to retailers. It is estimated that the total anthracite consumed in 1915 was only a little over 400,000 tons.

Natural gas is an important competitor of anthracite coal in Buffalo, with 76,000 consumers in 1916—estimated to have used 8,000,000.000 cubic feet of gas, displacing about 400,000 tons of anthracite coal. The decreasing supply of gas, however, creates a larger use of anthracite year by year.

Local shortage and its effect on prices and gross profits.—The shortage of coal in Buffalo during the fall and winter of 1916 was due to abnormal demand at a time of inadequate available supply. Tardy lowering of prices in the spring discouraged the storing of coal by even the small number of householders who usually take advantage of the summer reduction. Just previous to September 1, influenced by daily newspaper reports of the shortage, but impelled primarily by the threatened general railway strike, everybody suddenly demanded his winter's supply of coal. Shortage of cars and other causes prevented the wholesalers from receiving, in every case, a supply sufficient to meet the unusual demand, and as time went on this shortage increased rather than otherwise.

The situation was rendered more acute by the heavy demand for steam coal for use in industrial plants, manufacturing activity being unprecedented. One concern alone, as previously noted, used 18,500 tons more of anthracite coal in 1916 than in 1915, on account of large war contracts.

Under these conditions of extreme demand, too, the wholesale trestles were receiving only part of their normal supply, and after about a month stocks were heavily depleted. One wholesaler stated that his trestles ran only from 30 to 40 per cent of normal during the crisis period from October 15 to December 15; another, from 75 to 85 per cent. Two others called attention to the fact that while they sold more coal in the fall of 1916 than in the fall of 1915, the demand was so great that their trestles were closed down a considerable part of the time. The latter action was taken by all the trestle operators, at one time or another, partly to conserve supply, but usually because they were out of coal.

Retailers were obliged to take their turns in line under the wholesale trestles, and it is claimed that no preference was shown—"first come, first served." One retailer, however, stated that the trestle company with whom he dealt would call him up upon arrival of cars so that he might be among the first to drive under the trestle, and a wholesaler stated that he showed preference to his older customers.

In order to handle the demand to the best advantage and to conserve the supply, consumers also were served by the retailers with their immediate needs only; each retailer adopted the policy of delivering 1 or 2 tons to a customer, often less, and of serving only his regular customers. Even so, some people undoubtedly secured a ton from one dealer, a ton from another, and so on, and received more than their proportionate share. As a whole, the immediate needs of the people seem to have been met. Several dealers, under these conditions, were able during the most serious period (Oct. 15 to Dec. 15) to fill, respectively, only 90 per cent, 50 per cent, and 33½ per cent of their orders.

In this connection it should be noted that the closing of lake navigation about December 10, 1916, made possible the diversion to the

Buffalo district of anthracite in and around Buffalo which had been intended for lake trade. Buffalo, as the lake coal port, a reconsignment point, a sales center, and a city served almost wholly by railroad coal, possessed peculiar advantages during the shortage period. It was undoubtedly well served, in comparison with other cities near by or west of there. No premium coal of consequence was purchased, and prices, though increased, as explained later, were not dependent upon the payment of premiums, as they were in certain other cities, even in Niagara Falls, only 20 miles away. The shortage of anthracite in Buffalo, however, was pronounced, and the stability of the prices was due to the absence of any considerable quantity of independent or premium coal.

While practically no premium coal was received during this period (see p. 158), and prices did not increase to the extent noted in other places, there was some increase of price during the shortage. Normally, the wholesale trestle operators obtain a gross margin of from 35 to 40 cents per net ton on their wholesale business, while the larger retailers have worked on a margin of \$1.25 up until the past year, when, it is claimed, increasing wages and other expenses necessitated a larger gross margin in June and again in November. The tabulation below illustrates the increases in circular price per net ton on the principal household size:

Store coal.

	June, 1915.	Sept., 1915.	June, 1916.	Sept., 1916.	Nov. 15, 1916.	Jan. 16, 1917.
Wholesale price at trestle.....	\$5.35	\$5.65	\$5.60	\$5.90	\$6.15	\$6.50
Retail circular price.....	6.60	6.90	7.00	7.30	7.65	8.00
Gross margin of retailers.....	1 25	1.25	1.40	1.40	1.50	1.50

The increase of 25 cents per ton wholesale on November 15, 1916, was explained by the trestle men as necessary because trestles were nearly empty and the fall of the coal in unloading was so great as to raise the per cent of degradation considerably. All trestles followed the lead of E. L. Hedstrom, for this reason. At the same time the retail prices were raised 35 cents per ton.

It is believed that a great many of the small retailers observed the list prices. The larger companies state, however, that many small dealers operated on a margin of from 50 cents to \$1 per ton.

Actual wholesale margins.—Following is a table showing for three of the wholesale companies their average purchase price, average selling price at the trestles, and average gross margin per long ton (2,240 pounds) for each month during the shortage period. These three companies handled 369,000 out of the 404,000 gross tons sold at trestles in Buffalo in 1916, or 91.3 per cent of the total. In one section of this table, prepared sizes (broken, egg, stove, and chestnut) have been combined, and in the other steam sizes (pea, buckwheat, and screenings). In order to show the increase in prices to retailers effective November 15, 1916, that month has been divided into two periods.

TABLE 49.—Average purchase prices, selling prices, and gross margins, of three representative wholesalers, per gross ton, on trestle sales to dealers, September—December, 1916.

Sizes and periods.	Company No. 1.			Company No. 2.			Company No. 3.		
	Purchase price.	Sale price.	Gross margin.	Purchase price.	Sale price.	Gross margin.	Purchase price.	Sale price.	Gross margin.
Prepared sizes:									
September, 1916.....	\$6.236	\$6.709	\$0.473	\$6.175	\$6.706	\$0.531	\$5.966	\$6.693	\$0.727
October.....	6.202	6.682	.480	6.195	6.716	.521	6.068	6.679	.611
November 1 to 15.....	6.213	6.684	.471	6.201	6.725	.524	6.077	6.689	.612
November 16 to 30.....	6.213	6.963	.750	6.201	6.991	.790	6.077	6.958	.881
December.....	6.217	6.998	.781	6.203	7.015	.812	6.137	6.972	.835
Steam sizes:									
September, 1916.....	4.742	5.207	.465	2.064	2.389	.325	4.859	3.679	¹ 1.180
October.....	4.820	5.299	.479	2.266	2.901	.635	2.945	4.020	1.075
November 1 to 15.....	4.505	4.969	.464	2.717	3.377	.660	3.709	4.203	.494
November 16 to 30.....	4.505	5.251	.746	2.717	3.087	.370	3.709	4.150	.441
December.....	4.498	5.235	.737	2.946	3.024	.078	4.014	4.265	.251

¹ Loss.

Stability and uniformity of wholesale prices on prepared sizes at the various trestles are clearly illustrated by this table. Slight variations among the companies in the same month are caused by the method of combining all the prepared sizes in one average. For instance, chestnut coal has a higher cost price than other prepared sizes and the purchase of a large proportion of this size would increase a given company's average cost price. The same reason applies to variations in sales prices. As previously stated, the trestle prices to retailers were the same for any given size at all trestles. It should be noted that these figures are all on a gross-ton basis.

In steam sizes the cost price varies so widely for the separate sizes, and likewise the selling price, that variations in the tonnage of these separate sizes handled in a given month cause great fluctuations in the gross margins. For instance, pea coal in September cost one company \$5 per ton, while screenings cost \$1.75 per ton.

On November 15 all trestles advanced their circular prices 25 cents per net ton, about 28 cents per gross ton. This advance is clearly reflected in the above table, especially by the prepared sizes. The purchase price of the coal did not increase at this time, excepting the November 1 increase by the Philadelphia & Reading Coal & Iron Co. of 25 cents on stove coal and 15 cents on chestnut. The wholesalers explain that their increased selling price was made necessary by increased degradation. During the time of shortage, when the coal in trestles was nearly depleted, the unusual drop in unloading coal from the cars caused an abnormal breakage and consequently greater degradation. This advance in selling price without increase in purchase price resulted, as the table shows, in an increase of approximately 28 cents in the gross margins.

Actual retail margins.—The calculated gross margins of eight representative retailers having sales of 82,000 net tons of anthracite coal in 1916 are presented in Table 51. This 82,000 net tons is 18 per cent of the retail consumption in 1916. Cost prices in the table are actual average prices paid. The typical sales prices shown are an average of a selection of prices typical of sales to the different classes of busi-

ness served, and the table separates these classes in order to show the difference in the gross margins realized from each class.

Three sales averages are shown each month, the first representing typical sales around the 5th of the month, the second sales around the 15th, and the third sales around the 25th. The three gross margins shown each month are for the corresponding periods.

TABLE 50.—*Buffalo—Summary for 8 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 51 for detail by companies.]

	Broken.			Egg.			Stove.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
SEPTEMBER.									
Cost price.....	\$5.22	\$5.65	\$5.57	\$5.65	\$5.90	\$5.86	\$5.82	\$5.90	\$5.88
Typical household sale price.....	6.45	7.03	.....	6.76	7.40	.....	6.75	7.40	.....
Gross margin.....	.80	1.58	.....	.86	1.50	.....	.85	1.50	.....
Typical industrial sale price.....	6.25	6.50	.....	6.50	6.80	.....	6.68	7.30	.....
Gross margin.....	.60	.85	.....	.60	1.15	.....	.78	1.40	.....
Typical apartment house sale price.....	.....	.....	.....	6.80	6.80	.....	6.95	7.30	.....
Gross margin.....	.....	.....	.....	.90	.90	.....	1.05	1.40	.....
OCTOBER.									
Cost price.....	5.46	5.65	5.59	5.75	5.90	5.87	5.90	5.90	5.90
Typical household sale price.....	6.50	7.15	.....	6.80	7.40	.....	6.73	7.40	.....
Gross margin.....	.85	1.50	.....	.90	1.50	.....	.83	1.50	.....
Typical industrial sale price.....	6.25	6.55	.....	6.63	6.91	.....	6.65	6.98	.....
Gross margin.....	.60	1.09	.....	.73	1.05	.....	.75	1.08	.....
Typical apartment house sale price.....	6.55	6.55	.....	6.80	6.90	.....	7.05	7.05	.....
Gross margin.....	.90	.90	.....	.90	1.00	.....	1.15	1.15	.....
NOVEMBER.									
Cost price.....	5.77	5.86	5.80	5.99	6.14	6.03	6.00	6.06	6.03
Typical household sale price.....	6.65	7.40	.....	7.00	7.65	.....	6.85	7.65	.....
Gross margin.....	.84	1.57	.....	.91	1.66	.....	.85	1.63	.....
Typical industrial sale price.....	6.15	7.00	.....	6.37	7.26	.....	6.80	7.29	.....
Gross margin.....	.38	1.17	.....	.35	1.25	.....	.78	1.29	.....
Typical apartment house sale price.....	7.15	7.40	.....	7.13	7.30	.....	7.65	7.65	.....
Gross margin.....	1.32	1.57	.....	1.14	1.31	.....	1.63	1.63	.....
DECEMBER.									
Cost price.....	5.65	5.90	5.81	5.86	6.15	6.08	6.15	6.15	6.15
Typical household sale price.....	6.65	7.40	.....	7.33	7.65	.....	7.30	7.65	.....
Gross margin.....	.75	1.55	.....	1.18	1.50	.....	1.15	1.50	.....
Typical industrial sale price.....	6.15	6.84	.....	6.37	7.28	.....	6.81	7.34	.....
Gross margin.....	.25	1.06	.....	.22	1.29	.....	.66	1.19	.....
Typical apartment house sale price.....	7.40	7.40	.....	7.38	7.41	.....	.....	.....	.....
Gross margin.....	1.50	1.50	.....	1.23	1.26	.....	.....	.....	.....

TABLE 50.—*Buffalo—Summary of 8 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September — December, 1916.—*
Continued.

	Chestnut.			Pea.			Buckwheat.			Screenings.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
SEPTEMBER.												
Cost price.....	\$6.14	\$6.15	\$6.15	\$4.90	\$4.99	\$4.91	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
Typical household sale price.....	6.76	7.65	.....	5.65	6.40	.....	4.50	5.00	.....	.....	.....	.....
Gross margin.....	.61	1.50	.....	.75	1.50	.....	1.00	1.50	.....	.....	.....	.....
Typical industrial sale price.....	5.45	6.77	.....	5.42	5.50	.....	4.75	4.75	.....	2.20	2.20	.....
Gross margin.....	.70	.62	.....	.52	.60	.....	1.25	1.25	.....	1.30	1.30	.....
Typical apartment house sale price.....	.....	.....	.....	5.80	5.80	.....	4.35	4.35	.....	.....	.....	.....
Gross margin.....	.....	.....	.....	.90	.90	.....	.85	.85	.....	.....	.....	.....
OCTOBER.												
Cost price.....	6.15	6.15	6.15	4.90	4.91	4.91	3.50	3.50	3.50	.....	.....	.....
Typical household sale price.....	6.95	7.65	.....	5.60	6.40	.....	4.75	4.75	.....	.....	.....	.....
Gross margin.....	.80	1.50	.....	.70	1.50	.....	1.25	1.25	.....	.....	.....	.....
Typical industrial sale price.....	7.02	7.15	.....	5.46	5.90	.....	4.08	4.29	.....	.....	.....	.....
Gross margin.....	.87	1.00	.....	.56	.96	.....	.58	.79	.....	.....	.....	.....
Typical apartment house sale price.....	.....	.....	.....	5.78	5.82	.....	4.35	4.35	.....	.....	.....	.....
Gross margin.....	.....	.....	.....	.88	.92	.....	.85	.85	.....	.....	.....	.....
NOVEMBER.												
Cost price.....	6.20	6.40	6.29	4.96	5.10	5.02	3.53	3.75	3.64	.....	.....	.....
Typical household sale price.....	6.93	7.90	.....	5.84	6.65	.....	4.75	5.10	.....	.....	.....	.....
Gross margin.....	.73	1.64	.....	.80	1.69	.....	1.20	1.55	.....	.....	.....	.....
Typical industrial sale price.....	7.03	7.20	.....	5.51	5.93	.....	4.28	4.53	.....	.....	.....	.....
Gross margin.....	.83	1.00	.....	.47	.89	.....	.65	.90	.....	.....	.....	.....
Typical apartment house sale price.....	.....	.....	.....	5.75	6.04	.....	4.35	4.35	.....	.....	.....	.....
Gross margin.....	.....	.....	.....	.79	1.08	.....	.82	.82	.....	.....	.....	.....
DECEMBER.												
Cost price.....	6.40	6.40	6.40	5.15	5.15	5.15	3.75	3.75	3.75	.....	.....	.....
Typical household sale price.....	7.30	7.90	.....	6.40	6.65	.....	5.10	5.35	.....	.....	.....	.....
Gross margin.....	.90	1.50	.....	1.25	1.50	.....	1.35	1.60	.....	.....	.....	.....
Typical industrial sale price.....	7.00	7.55	.....	.....	.....	.....	4.25	4.85	.....	.....	.....	.....
Gross Margin.....	.60	1.15	.....	.....	.....	.....	.50	1.10	.....	.....	.....	.....
Typical apartment house sale price.....	.....	.....	.....	6.00	6.65	.....	4.60	4.60	.....	.....	.....	.....
Gross margin.....	.....	.....	.....	.85	1.50	.....	.85	.85	.....	.....	.....	.....

¹ Contract.² Loss.

TABLE 51.—*Buffalo—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 8 representative dealers, September—December, 1916—Continued.*

STOVE.

	September.						October.						November.						December.					
	Class of business.						Class of business.						Class of business.						Class of business.					
	Household.		Industrial.		Apartment house.		Household.		Industrial.		Apartment house.		Household.		Industrial.		Apartment house.		Household.		Industrial.		Apartment house.	
	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
<i>Circular prices.</i>	\$5.90	\$7.30					\$5.90	\$7.30					\$5.90	\$7.30					\$6.15	\$7.65				
<i>Company:</i>																								
No. 1.....	6.89	90	7.30	1.40			6.73	80	83	86	65	80	75	6.00	7.25	1.25	7.10	1.10	6.15	7.44	1.29	7.34	1.19	
	6.84	84	6.83	.78			6.73	83	83	6.98	1.08				7.34	1.34	7.29	1.29		7.43	1.28	7.11	.96	
No. 2.....	6.83	1.03					7.16	1.26						6.02	7.30	1.28				7.65	1.50			
	5.90	6.98	1.08	\$6.95	\$1.05		7.11	1.21							7.42	1.40				7.58	1.43			
	7.13	1.23		7.30	1.40		7.30	1.40							7.05	1.03	6.80	.78		7.35	1.20	7.15	1.06	
No. 3.....	5.82	7.03	1.23	6.80	.98		7.05	1.15	6.80	.90			6.02	7.43	1.41	7.15	1.13		6.15	7.39	1.20	7.15	1.06	
	7.25	1.35					7.05	1.15					6.06	7.30	1.24					7.65	1.50			
No. 4.....	5.90	7.30	1.40				7.30	1.40							7.51	1.45				7.65	1.50			
	6.95	1.06					7.08	1.18						7.30	1.24					7.65	1.50			
No. 5.....	5.88	6.91	1.02				7.25	1.35					6.06	7.40	1.34					7.59	1.44			
	7.05	1.16					7.21	1.31							7.65	1.59				7.57	1.42			
No. 6 ^a																								
	7.40	1.50					7.40	1.50							7.40	1.37				7.65	1.50			
No. 7.....	5.90	7.40	1.50				7.40	1.50					6.03	7.65	1.62					7.65	1.50			
	7.00	1.10					6.80	.90							7.08	1.05				7.48	1.33			
No. 8.....	5.90	6.75	.85				5.90	7.00	1.10				6.03	7.49	1.46					6.15	7.65	1.50		
	6.90	1.00					6.95	1.05							7.40	1.37				7.40	1.37			
Minimum.....	5.82	6.75	.85	.78	6.95	1.05	5.90	6.73	.83	6.65	.75	7.05	1.15	6.00	6.85	.85	6.80	.78	7.65	1.63	6.15	7.30	1.15	6.81
Maximum.....	5.90	7.40	1.50	1.40	7.30	1.40	7.40	1.50	6.98	1.08	7.05	1.15	6.06	7.65	1.63	7.29	1.29	7.65	1.63	6.15	7.34	1.15	6.81	.66
Weighted average.....	5.88						5.90						6.03						6.15					

CHESTNUT.

[illegible]

1 Nov. 1 to 15.

2 Nov. 16 to 30.

This comp

4 Contract.

⁶ LOSS.

●●●●●

Prices run about 15 to 50 cents below those of most of the other large retailers.

4 Contract.

⁶ Loss.

iii

TABLE 51.—*Buffalo—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 8 representative dealers, September—December, 1916—Continued.*
P.E.A.

	September.						October.						November.						December.					
	Class of business.						Class of business.						Class of business.						Class of business.					
	Household.		Industrial.		Apartment house.		Household.		Industrial.		Apartment house.		Household.		Industrial.		Apartment house.		Household.		Industrial.		Apartment house.	
	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
<i>Circular prices</i>	\$4.90	\$3.50					\$4.90	\$3.30					\$4.90	1.86	30				\$5.15	\$3.65				
<i>Company:</i>																								
No. 1.....	4.90	5.90 \$1.00	5.42	.52			4.90	5.80 .90	5.40	.56			5.84	80.80	\$5.51	\$0.47			5.04	1.19	5.75	.71		
		5.65	.75	5.49	.59			6.30	1.40			6.30	1.34	6.30	1.34	5.93	.89			6.38	1.34	5.93	.89	
No. 2.....	4.90	6.15 1.25					4.90	6.13 1.23					6.45	1.52					4.96	6.45	1.52			
		6.30 1.40						6.22 1.32					6.05	1.69						6.05	1.69			
								\$5.80 .90					5.82	.92						6.04	1.08			
No. 3.....							4.90	6.05 1.15					6.05	.95	5.80	.70			5.10	6.25	1.25			
								6.05 1.15					6.35	1.55	5.80	.70				6.65	1.55			
No. 4.....	4.90	6.30 1.40					4.90	6.30 1.40					6.42	1.41					5.01	6.30	1.29			
		6.30 1.40						6.30 1.40					6.65	1.64						6.42	1.41			
No. 5.....	4.90	6.30 1.31					4.94	6.00 1.04					6.30	1.20	5.90	.89			5.01	6.65	1.64			
		6.05 1.06						6.05 1.11					6.05	1.04						6.30	1.20	5.90	.89	
								6.30 1.36					6.57	1.56	5.82	.81				6.05	1.04			
No. 6.....																								
								6.40 1.50					6.46	1.30						6.65	1.50			
No. 7.....	4.90	6.40 1.50					4.90	6.40 1.50					6.05	1.55					5.10	6.05	1.55			
								6.40 1.50					6.65	1.65						6.65	1.50			
No. 8.....	4.90	6.00 1.10					4.90						6.55	1.45					5.10	6.55	1.45			
								6.00 1.10					6.40	1.30						6.40	1.25			
Minimum.....	4.90	5.65	.75	5.42	.52	5.80	.90	5.60	.70	5.46	.56	5.78	.88	6.40	1.30	5.51	.47	5.75	4.96	5.84	.80	5.15	6.40	6.00
Maximum.....	4.99	6.40	1.50	5.50	.60	5.80	.90	6.40	1.50	5.90	.96	5.82	.92	6.65	1.69	5.93	.89	6.04	5.10	6.65	1.65	5.15	6.65	6.65
Weighted average.....	4.91						4.91						5.02						5.02					

BUCKWHEAT.

Circular prices.		\$3.50 \$5.00		\$3.50 \$5.00		\$4.19 \$0.69		{ \$3.50 1.35 .00 } 3.75 2.35		\$3.75 \$5.35	
Company:											
No. 1.....	3.50	{ \$4.75 1.25 } 3.50	{ \$3.50 } 3.50	{ \$4.08 .55 } 4.29 .79	{ \$4.19 \$0.69 } 4.08 .55	{ 3.63 } 3.63	{ \$4.28 \$0.65 } 4.33 .90	{ 3.75 } 3.75	{ \$4.25 \$0.50 } 4.33 .58		
No. 2.....	3.50	{ \$4.75 1.25 } 3.50	{ \$4.35 \$0.85 } 3.50	{ \$4.29 .79 } 4.35 .85	{ \$4.35 \$0.85 } 4.35 .85	{ 3.53 } 3.53	{ \$4.42 .79 } 5.00 \$1.47	{ 3.75 } 3.75	{ \$4.29 .54 } 5.35 1.60		
No. 3.....											
No. 5.....	3.50	{ \$5.00 \$1.50 } 4.50 1.00									
No. 6 ³											
No. 8.....	3.50	{ \$4.75 1.25 } 4.75 1.25	{ \$3.50 } 3.50	{ \$4.75 \$1.25 } 4.75 1.25	{ 3.55 } 3.55	{ 4.75 } 5.10 1.55	{ \$5.10 1.35 } 5.10 1.35	{ 3.75 } 3.75	{ \$5.10 1.35 } 5.10 1.35		
Minimum.....	3.50	4.50 1.00	4.75 1.25	4.85 3.50	4.75 1.25	3.53	4.75 1.20	4.28	6.5 4.35	82	3.75 5.10
Maximum.....	3.50	5.00 1.50	4.75 1.25	4.85 3.50	4.75 1.25	3.75	5.10 1.55	4.53	9.0 4.35	82	3.75 5.35
Weighted average.....	3.50		3.50			3.64					3.75

SCREENINGS.

[illegible]

1 Nov. 1 to 15

² Nov., 16 to 30.

• This company operates a strictly cash business on a practically constant gross margin. Prices run about 15 to 50 cents below those of most of the other large retailers.

Attention has already been called to the general increase, as computed from circulars, in gross margins of retail dealers in Buffalo since 1915, when it was about \$1.25 per ton on the total tonnage of all sizes handled. In June, 1916, it was raised to \$1.40 and on November 15, 1916, to \$1.50. These were circular increases, however.

For purposes of comparison with the purchase and sale prices taken from the books of the companies, the table shows prices quoted by these printed circulars, both those quoted to retailers for coal in their wagons at the trestles and those quoted by the retail dealers to the household consumers, sidewalk delivery. The average prices and margins actually received were as a rule, less than the prices and margins called for by the printed circulars, as will be noted from the above table.

One of the eight representative companies shown in the table made a practice of putting coal in the consumer's bin at the retail circular prices, and of delivering coal on the sidewalk for 25 cents a ton less. Several other companies followed the full circular for sidewalk deliveries and made an extra charge of 25 cents for carrying it in. Nearly all the dealers shown have a few favored customers, employees or friends, who receive special prices. It is the exception, therefore, when the full gross margin contemplated by the published circulars is obtained. The table shows that only two companies (Nos. 4 and 7) had margins in line with those contemplated by the circulars.

As a rule, the Buffalo retailers do not take contract business, as explained on page 276. Some industrial trade, however, was handled by companies 1, 3, 5, and 7, without contracts, the average prices and margins on which were usually less than on household trade.

Apartment houses also receive somewhat better prices as a rule than the household customers, as they purchase in larger quantities and often take a regular tonnage at stated intervals. The discount usually runs from 25 to 50 cents a ton, although company No. 2 made some apartment-house deliveries of stove coal at full household prices in September and November, as shown by the table.

Generally, the table shows that during the period covered prices and margins were raised by these representative dealers, reaching a fairly uniform level by December, after considerable variation in the first part of the period. The total increase was, on the average, about 30 to 40 cents a ton. Of this, as previously noted, 25 cents was due to the issuance of new wholesale prices by the trestle companies advancing the price to the retailer 25 cents on the 15th of November. All increase over this 25 cents was asserted by the retailers to have been due to increasing expenses of conducting business.

As compared with other cities, Buffalo retail prices were advanced but little during the shortage period. This relative steadiness of the market appears to have been due almost entirely to the fact that the bulk of the coal sold was railroad company coal on which the producing companies did not advance their prices.

NIAGARA FALLS, N. Y.

Transportation.—Anthracite coal enters Niagara Falls principally over the New York Central & Hudson River, the Erie, and the Lehigh Valley Railroads. Freight rates are the same as to Buffalo, namely, \$2 per gross ton on prepared sizes and \$1.75 on pea and smaller.

Sources of supply and local distribution.—The following railroad coal companies sell anthracite in carload lots to dealers and industrial concerns in Niagara Falls:

Delaware, Lackawanna & Western Coal Co. (Sales company of D., L. & W. R. R.)

Lehigh Valley Coal Sales Co.; sales company for Lehigh Valley Coal Co. (L. V. R. R.)

Millspaugh & Green Co., selling for Hudson Coal Co. (Delaware & Hudson R. R.)

Susquehanna Coal Co. (Pa. R. R.)

Williams & Peters, selling agents for Pennsylvania Coal Co. and Hillside Coal & Iron Co. (Erie R. R.)

Normally little independent anthracite comes into Niagara Falls, except occasional cars from Thorne, Neale & Co.

Anthracite is distributed to consumers by retailers, who as a rule maintain storage bins and delivery systems. There are probably 14 dealers who handle 2,000 tons or more per annum, the largest estimated to sell about 19,000 tons. There are only three, however, who sell over 10,000 tons, and the largest of the remaining retailers sold much less than this in 1916.

The principal demand for coal for industrial use falls upon bituminous rather than anthracite, although one plant reports an annual consumption of about 3,000 tons of grate (broken) coal, and another used upward of 12,000 tons of anthracite screenings last year, besides about 3,000 to 4,000 tons of grate coal. Still another placed an order in September, 1915, with the Delaware, Lackawanna & Western Coal Co., through its Buffalo agent, for about 3,000 gross tons of grate or broken coal. Grate coal is used as raw material in manufacturing processes at some of the plants. One plant consumes from 4,000 to 5,000 tons of pea coal a year. Few concerns use such quantities of anthracite coal, however, and it is believed those mentioned have been the exceptions.

Consumption of anthracite in Niagara Falls, including household and industrial trade, is estimated to have been about 125,000 tons in 1916.

Local shortage and its effect on prices and gross profits.—Although the greater part of the local supply of anthracite normally comes from the railroad coal companies' sales agents, receipts were so far below the demand in the fall of 1916 that dealers were obliged to purchase large quantities of independent coal.

It is well to understand that an unusual demand existed coincidentally with the shortage. Niagara Falls is said by its Real Estate Exchange to have grown during the past year to the extent of more than 700 occupied houses, over and above the number occupied in 1915. Its growth in population has been unprecedented, responding to the increased prosperity of its industries. One large plant had an increase of 30 per cent over 1915 in its consumption of anthracite coal, while other plants have been forced into the open market in order to meet their increased needs over and above contracted amounts.

This unusual but natural increase in demand was heightened by the late spring and omission of the usual summer reduction in retail prices, which led to less storing of coal during the summer. The newspaper articles heralding the coming shortage, and particu-

larly the fear of a general railway strike, precipitated a demand in the early fall for a full winter's supply. Some dealers were able to meet this demand and at first did so from the stock which they had on hand, but it soon became apparent that shipments of coal from usual sources of supply were coming in far below normal—one company stating its receipts during the fall averaged only 10 per cent of normal. The large retail companies seem to have received more coal in proportion than the smaller ones, two or three of which had to practically shut down after October 1. Several of the dealers sold more than in 1915, but were still unable to meet the demand. The supply was conserved as the shortage increased, and orders were taken only from old customers, as far as possible, only small quantities being delivered to a customer. Attempts were made to prevent duplication of orders for the same address among several dealers. After September 1, 1916, practically all retailers operated on a cash basis.

One of the largest companies took orders in the summer for coal to be delivered in the fall. The summer retail price on egg and stove coal was \$6.75, and coal delivered on these orders at this price cost the company in some instances as high as \$9.38 per net ton. Another large dealer anticipated the panic and took no orders for future delivery from a time back in August, thus avoiding delivery of high-price coal on summer prices. The Welch Coal Co. has a school-department contract calling for the delivery of about 1,500 tons of anthracite coal during the year at a price of \$6.55 per net ton, for egg coal, as well as a large industrial contract, upon both of which agreements it has been delivering during the crisis period, at times furnishing coal which cost it more than the price received. This, of course, affected its normal gross margin of profit.

Anthracite coal was offered in Niagara Falls by independent jobbers at premium prices.

Six different jobbers sold anthracite coal in Niagara Falls at premium prices during October, November, and December, 1916.

In one instance 17 cars of premium coal were purchased from one of the six at a premium by another jobber and sold to a Niagara Falls retailer at an increase of from 22 to 54 cents per net ton over the price the second jobber paid to the first jobber.

One dealer stated that he had an order for several cars accepted by a jobber at a premium price of \$8.35 per ton and that he was later given an excuse for its nondelivery, while a neighbor dealer who had in the meantime placed with the same jobber a somewhat larger order for the same kind of coal at \$10 a ton received the shipment.

These instances illustrate the difficulties of obtaining coal, even at a premium. The period of greatest difficulty and of the highest prices in Niagara Falls was from October 1 to December 1.

The following table presents the average cost prices, selling prices, and gross margins of three representative retailers in Niagara Falls from September 1 to December 31, 1916, by months. The companies here represented sold 30,000 of the 125,000 tons of anthracite estimated to have been consumed in 1916, or 24 per cent.

TABLE 52.—*Niagara Falls—Retailers' cost prices, actual average or typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, for 3 representative dealers, September—December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit.
See pp. 150 to 158.]

	September.			October.			November.			December.		
	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.
Broken:												
Company No. 1.....							\$5.22	\$6.35	\$1.13	\$5.22	\$6.23	\$1.01
Egg:												
Company—												
No. 1.....	\$5.45	\$6.73	\$1.28	\$5.45	\$6.71	\$1.26	7.18	7.44	.26	5.45	7.28	1.83
No. 2.....	5.19	7.08	1.89	5.19	7.22	2.03	5.19	8.10	2.91	5.64	8.10	2.46
No. 3 ¹	5.36	7.25	1.89	5.51	7.25	1.74	5.51	7.92	2.41	5.47	7.50	2.03
					6.75	1.24		9.33	3.82		7.50	2.03
					7.00	1.49		10.00	4.49		7.50	2.03
Stove:												
Company—												
No. 1.....	5.45	5.50	.05	5.45	7.31	1.86	8.12	8.13	.01	5.45	7.98	2.53
No. 2.....	5.34	7.02	1.68	5.37	7.19	1.82	5.91	8.14	2.23	7.41	7.97	.56
No. 3 ¹	5.43	7.15	1.72	5.47	7.00	1.53	5.46	10.25	4.79	5.87	8.00	2.13
		7.25	1.82		7.15	1.68		9.19	3.73		8.00	2.13
		6.92	1.49		7.75	2.28		10.00	4.54		8.00	2.13
Chestnut:												
Company—												
No. 1.....	5.67	7.87	2.20	6.40	7.62	1.22	8.30	9.29	.99	5.80	8.58	2.78
No. 2.....	5.51	7.44	1.93	5.51	7.93	2.42	6.73	7.88	1.15	7.65	10.08	2.43
No. 3 ¹	5.63	7.31	1.68	5.66	7.29	1.63	6.90	9.50	2.60	6.18	10.50	4.32
		7.25	1.62		7.50	1.84		10.00	3.10		8.00	1.82
		7.50	1.87		8.00	2.34		10.25	3.35		8.00	1.82
Pea:												
Company—												
No. 1.....	4.46	5.64	1.18	8.93	6.51	2.42	5.13	7.67	2.54	4.46	6.86	2.40
No. 2.....	3.88	6.18	2.30	4.18	6.80	2.62	4.18	8.37	4.19	4.18	7.22	3.04
No. 3 ¹	4.15	6.00	1.85	4.43	6.25	1.82	4.43	7.06	2.63	5.29	9.00	3.71
		6.25	2.10		6.25	1.82		8.83	4.40		7.00	1.71
		6.00	1.85		6.75	2.32					7.00	1.71
Buckwheat:												
Company—												
No. 1.....	3.13	4.12	.99	3.13	4.30	1.17	3.13	4.33	1.20	3.13	4.40	1.27
No. 2.....				3.12	5.50	2.38	3.89	5.92	2.03	3.89	5.85	1.96
No. 3.....				3.12	5.00	1.88				3.12	5.00	1.88

¹ Where 3 prices are shown they represent prices around the 5th, 15th, and 25th of the month.

² Loss.

The sales figures shown in this table for companies No. 1 and No. 2 represent the actual average prices received per net ton on all sales. In this they differ from the Buffalo table, for instance, in that they give a single average price for all classes of trade, instead of showing typical prices on different classes of business. It should be borne in mind that the prices charged household customers in any month may have exceeded somewhat the figure shown in the table for these companies, as sales at lower prices to large industrial consumers or to municipal departments, which are also included, affect the average. The cost prices are also actual averages of all purchases, and consequently the resultant margins are the actual average gross margins realized.

The three sales figures for company No. 3 represent typical household prices around the 5th, 15th, and 25th of the month.

The six Niagara Falls dealers interviewed by agents of the Commission stated that their gross margin in 1915, which may be taken as normal, was about \$1.50 to \$2 a net ton on household sizes. The above table, covering three representatives dealers, illustrates the

effect of the 1916 shortage and of premium coal upon this normal margin. The results at any one time vary without rule among the different companies.

Company No. 1 shows a gross margin on all its anthracite business of only \$1.28 on egg and 5 cents on stove in September, while chestnut returned an average gross margin of \$2.20 per ton. Its margin was \$1.18 on pea and 99 cents on buckwheat. This company's comparatively low margins on some sizes in September were directly due to the fall delivery of orders taken at summer prices and to a large amount of low-price trade.

The loss of \$2.42 a ton sustained by this company on pea coal in October was on account of a purchase at high premium, raising its average cost to \$8.93 per ton, with which it filled orders accepted at the usual prices. This loss figure does not include the cost of handling the business, but is the bare difference between average purchase price and average selling price. It is interesting to note that in November this company's average cost price decreased \$3.80 a ton, while the average selling price had been raised, so that the company's average gross margin on pea coal in that month was \$2.54.

November was the month of high premiums and high retail prices generally, although the proportion of premium coal purchased by the different companies varied. Company No. 1 made a gross margin of only 1 cent per ton on stove coal in November, in spite of the higher retail prices in effect in that month as compared with October; the increase in cost from \$5.45 per ton in October to \$8.12 in November is the cause, nearly 300 tons of stove coal at high premiums having been purchased. Company No. 2, on the other hand, while it purchased some premium coal, raised its average margin about 40 cents above October on account of increased prices. Company No. 3, purchasing practically no premium coal, but obtaining the top prices for what coal it had, realized the highest margins of all, over \$4 per ton on the average.

Following these companies into December, the relations are reversed, for while company No. 1 had railroad coal to sell at the December retail prices, the other two companies bought more premium coal than in November and their margins were considerably reduced. Even so, company No. 3 realized \$2.13 margin, while No. 2, with a higher average purchase price, made only 56 cents a ton.

Company No. 3 purchased less premium coal in proportion to its total business than some of the others, and obtained at the same time the highest average prices of the three companies shown above. Gross margins realized by this company on the household sizes in October and November were considerably above the normal \$2 a ton.

ROCHESTER, N. Y.

To a large extent the method of distributing coal in Rochester is similar to that in Buffalo. Because of the fact that the fall shortage was much less pronounced than in Buffalo, a detailed study of the conditions in the coal trade in 1916 was not made at Rochester. Most of the trestle operators and several retailers and others were interviewed, and the following outline of the situation in Rochester is based largely on their statements.

Transportation.—Anthracite coal enters Rochester principally over the Erie, Lehigh Valley, New York Central & Hudson River, and Pennsylvania Railroads. While the actual freight rate to Rochester on prepared sizes varies from \$1.85 on the Lehigh Valley to \$1.90 on the New York Central and \$2 on the Pennsylvania, all coal is sold delivered at Rochester by the railroad coal companies at the same price, the Buffalo rate of \$2 per gross ton on prepared sizes and \$1.75 on pea coal and smaller being taken as the basis.

Sources of supply, and local distribution.—About three-fourths of the anthracite coal sold in Rochester is bought by the retailers at 11 trestles operated by large wholesale trestle companies as in Buffalo or by the railroad coal companies or their affiliated sales companies or agents. The remaining one-fourth is bought from the coal companies direct in carload lots by 9 or 10 retailers who maintain regular yards with storage bins, teams, etc. Very little independent coal is sold in Rochester.

There are about 90 retailers in Rochester and all but 9 or 10 of them buy from the wholesale trestles for delivery to the consumer. A majority of the retailers in Rochester maintain offices only, while in Buffalo the retailers usually also keep their own teams and do their own carting. In Rochester practically 75 per cent of the dealers have their teaming done by contracts with carters, who are said to be strongly unionized. Several large carting concerns have contracts which cover the handling of a majority of the total coal consumed in Rochester. A retailer well acquainted with the local situation estimates that one-half of the 90 retailers sell less than 1,000 tons of anthracite annually.

Consumption.—The consumption of anthracite in Rochester is estimated to amount normally to about 400,000 tons per year.

Extent and causes of shortage.—Rochester was stated by all informants to have escaped fairly well the panic of the fall of 1916. It was thought to be a fortunate city in that the railroad companies deliver practically all the coal consumed.

The shipments of coal by the railroad companies appear to have been fairly regular during the fall months. It seems probable that more anthracite was shipped into Rochester during 1916 than in 1915, but there was an unusual demand for coal, particularly in November. This was held to be due to the fact that consumers did not store coal in April, as is usual, and tried to get a winter's supply in November. Others, fearing a shortage, ordered coal when their bins were not yet empty. As a rule the November demand is not large, the consumer stocking up early and the supply lasting until January or February, when the demand again occurs.

There was a shortage in some sizes, principally stove and chestnut, on certain days in October, November, and December. At such times consumers who were out of coal were supplied with other sizes; those who could wait were given coal of the desired size within a day or two, when it came in. There was always some coal to be bought at the trestles and at no time in the fall were the trestles shut down as at Buffalo.

As in Buffalo, the trestle operators endeavored to stay the semi-panic which prevailed by persuading their customers to take only enough to meet their immediate needs, assuring them of plenty of coal later. Little or no premium coal seems to have been purchased.

Prices during the shortage.—Until January, 1917, all the trestle operators, with the exception of the Philadelphia & Reading Coal & Iron Co., charged the same prices to retailers at the trestle, obtaining a gross margin of profit of 22 cents per net ton. In November, 1916, the latter company increased its gross margin to 45 cents per net ton, and in January, 1917, the other trestle operators followed its lead. This increase, it is stated, was made to cover the actual increased cost of operation of the trestles.

The retailers all charge practically the same prices for coal. Those who purchased at the trestles worked on a gross margin of about \$1.50 per net ton in 1915, but, it is claimed, increasing wages and other expenses necessitated a larger gross margin in 1916. Attention was called particularly to the fact that the majority of the dealers have their carting done by contract at a fixed rate of 50 cents a ton, which reduced their actual gross margin by that amount, and that beginning with December 18, 1916, the rate for carting had been raised by the teamsters to 55 cents per net ton which, after December 18, offset in part the November increase in retail prices. The increase in November was explained on the ground that one of the trestles had increased its price to retailers.

The tabulation below illustrates the increase in circular price per net ton on the principal household size since the summer of 1915:

	June, 1915.	June, 1916.	September, 1916.	November and Decem- ber, 1916.
Wholesale price at trestle.....	5.18	5.40	5.67	5.67
Retail circular price.....	6.70	7.00	7.40	7.75
Gross margin of retailer ²	1.52	1.60	1.73	2.08

¹ For trestles other than Philadelphia & Reading Coal & Iron Co.

² Some dealers raised the price in November, others Dec. 1.

³ Includes 50 cents for carting.

The retail prices shown are the circular prices universally adopted by all retailers in Rochester. They do not necessarily represent the prices at which the coal was actually sold. For instance, they do not take into account coal delivered in the fall at summer prices. It was stated to be a very general practice, normally, among the retailers in Rochester to make no actual increase in price after the usual spring reduction until September, at which time they have added the deferred summer increases of 10 cents a month, or a total of 50 cents. While this practice was not so generally adhered to in 1916, undoubtedly the average gross margin as shown by the books of the retailers would vary somewhat from the gross margin given in the accompanying tables, for the reasons already mentioned. Dealers buying coal at the trestles of the Philadelphia & Reading Coal & Iron Co. in November and December were obliged to pay the increases in the trestle prices that went into operation at those trestles in November.

The table below gives only a general idea of the gross margins of profit obtained in Rochester. The cost per net ton f. o. b. Rochester is the published circular price of the railroad coal companies, not necessarily representing actual average cost to the wholesalers operating trestles. The wholesale selling price at the trestles is the price uniformly charged at all trestles until November, when, as already

explained, the Philadelphia & Reading Coal & Iron Co. increased its trestle prices, and such retailers as purchased coal at the two Philadelphia & Reading trestles necessarily made a smaller gross margin. The retail circular prices are the circular prices published by the retailers and do not necessarily represent the prices actually received, as already explained above. The total gross margin entered in the table shows the difference between the ultimate published cost to the consumer and the cost f. o. b. Rochester and furnishes an approximate gross margin for those 9 or 10 retailers who conduct retail yards with storage facilities and teams and buy by the carload.

TABLE 53.—*Rochester, N. Y.—Circular purchase and sale prices of wholesalers and principal retailers of anthracite, by months, April—December, 1916.*

	April.	May.	June.	July.	August.	September.	October.	November. ¹	December.
Broken, or grate:									
F. o. b. cars, Rochester...	\$5.00	\$4.87	\$4.96	\$5.04	\$5.13	\$5.22	\$5.22	\$5.22	\$5.22
Wholesale trestle.....	5.22	5.09	5.18	5.27	5.36	5.45	5.45	5.45	5.45
Retail (circular).....	6.75	6.75	6.75	6.95	7.05	7.15	7.15	7.25	7.25
Gross trestle margin.....	.22	.22	.22	.23	.23	.23	.23	.23	.23
Gross retail margin ²	1.53	1.66	1.57	1.68	1.69	1.70	1.70	1.80	1.80
Total gross margin.....	1.75	1.88	1.79	1.91	1.92	1.93	1.93	2.03	2.03
Egg:									
F. o. b. cars, Rochester...	5.22	5.09	5.18	5.27	5.36	5.45	5.45	5.45	5.45
Wholesale trestle.....	5.45	5.31	5.40	5.49	5.58	5.67	5.67	5.67	5.67
Retail (circular).....	7.00	7.00	7.00	7.20	7.30	7.40	7.40	7.50	7.50
Gross trestle margin.....	.23	.22	.22	.22	.22	.22	.22	.22	.22
Gross retail margin ²	1.55	1.69	1.60	1.71	1.72	1.73	1.73	1.83	1.83
Total gross margin.....	1.78	1.91	1.82	1.93	1.94	1.95	1.95	2.05	2.05
Stove:									
F. o. b. cars, Rochester...	5.22	5.09	5.18	5.27	5.36	5.45	5.45	5.45	5.45
Wholesale trestle.....	5.45	5.31	5.40	5.49	5.58	5.67	5.67	5.67	5.67
Retail (circular).....	7.00	7.00	7.00	7.20	7.30	7.40	7.40	7.75	7.75
Gross trestle margin.....	.23	.22	.22	.22	.22	.22	.22	.22	.22
Gross retail margin ²	1.55	1.69	1.60	1.71	1.72	1.73	1.73	2.08	2.08
Total gross margin.....	1.78	1.91	1.82	1.93	1.94	1.95	1.95	2.30	2.30
Chestnut:									
F. o. b. cars, Rochester...	5.45	5.31	5.40	5.49	5.58	5.67	5.67	5.67	5.67
Wholesale trestle.....	5.67	5.54	5.63	5.71	5.80	5.89	5.89	5.89	5.89
Retail (circular).....	7.25	7.25	7.25	7.45	7.55	7.65	7.65	7.90	7.90
Gross trestle margin.....	.22	.23	.23	.22	.22	.22	.22	.22	.22
Gross retail margin ²	1.58	1.71	1.62	1.74	1.75	1.76	1.76	2.01	2.01
Total gross margin.....	1.80	1.94	1.85	1.96	1.97	1.98	1.98	2.23	2.23
Pea:									
F. o. b. cars, Rochester...	3.84	3.88	3.97	4.06	4.15	4.24	4.24	4.24	4.24
Wholesale trestle.....	4.06	4.11	4.20	4.29	4.38	4.46	4.46	4.46	4.46
Retail (circular).....	5.75	5.75	5.75	5.95	6.05	6.15	6.15	6.50	6.50
Gross trestle margin.....	.22	.23	.23	.23	.23	.22	.22	.22	.22
Gross retail margin ²	1.69	1.64	1.55	1.66	1.67	1.69	1.69	2.04	2.04
Total gross margin.....	1.91	1.87	1.78	1.89	1.90	1.91	1.91	2.26	2.26
Buckwheat:									
F. o. b. cars, Rochester...	2.86	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
Wholesale trestle.....	2.86	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
Retail (circular).....	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.50	4.50
Gross retail margin ²	1.39	1.21	1.21	1.21	1.21	1.21	1.21	1.46	1.46

¹ Certain dealers did not raise their circular prices until Dec. 1, 1916.

² Includes 50 cents for carting, up to Dec. 18, 1916, when the contract price for carting was raised to 55 cents per net ton.

WESTERN MARKETS ON THE GREAT LAKES.

Sources of supply.—The Middle Western States get their supply of anthracite coal partly by rail and partly by lake routes. The bulk of both lake and rail shipments comes by way of Buffalo, N. Y., small quantities coming from Oswego and Erie. Some also comes by way of Pittsburgh via the Pennsylvania and the Delaware & Hudson, and some Erie coal is shipped by way of Salamanca, N. Y.

Detroit and Chicago get a high proportion of their anthracite all rail. Outside of the territory supplied by these two cities, other points in the Northwestern States receive anthracite chiefly from the docks at Milwaukee, Racine, Sheboygan, Manitowoc, Green Bay, Duluth, and Superior, which points, in turn, receive it directly from Buffalo by lake. The region thus served includes Minnesota, northern Iowa, the Dakotas, and the northwestern part of Wisconsin. A few scattered cars go into Nebraska and Montana. Some dock coal goes from Duluth and Superior to Canada, where the American dock companies have leased docks at Fort William and Port Arthur with sales agencies at Winnipeg and Port Arthur.

About 90 per cent of the anthracite coal handled at these docks is shipped there by the railroad coal companies on consignment and is unloaded, screened, resized, stored, and shipped by the dock companies.

The large dock companies in Milwaukee, Minneapolis, and St. Paul appear to be the leading factors in the coal trade in these cities. They operate as dock companies, as wholesalers and as retailers, and in this threefold capacity exercise a controlling influence on the direct supply of anthracite in their respective territory.

DETROIT.

Transportation.—Detroit receives practically its entire supply of anthracite by rail from Buffalo over the Michigan Central, Wabash, Lake Shore, Pere Marquette, Detroit & Toledo Shore Line, and Grand Trunk. Lake shipments are normally very small. Toledo is the gateway through which most of the rail coal comes, although the Michigan Central, Wabash, and Grand Trunk have direct short lines from Buffalo to Detroit through Canada. The shortest route is via the Michigan Central Short Line, 251 miles.

The normal time required from the mines to Detroit is from five to eight days (three to five days from Buffalo), but during the fall and winter of 1916, Detroit dealers stated, the time varied from a week to a month and often longer. They say that coal has been delayed for days and sometimes weeks by the local congestion at Toledo. Complaint has been made that even in Detroit's own limits cars were received which were not placed on the tracks at the dealer's yard for several weeks.

Sources of supply and local distribution.—Under normal conditions Detroit depends largely upon railroad coal company anthracite. Several important retailers buy some independent coal, however. The railroad coal companies, or their agents, selling in Detroit are as follows:

Delaware, Lackawanna & Western Coal Co. (D. L. & W. R. R.); Lehigh Valley Coal Sales Co. (L. V. R. R.); Millspaugh & Green

Co., handling D. & H. Co. coal; Philadelphia & Reading Coal & Iron Co. (P. & R. R. R.); Susquehanna Coal Co. (Pennsylvania R. R.); Williams & Peters, handling Pennsylvania Coal Co. coal (Erie R. R.).

The following companies, with principal offices in the cities named, are represented in Detroit and handle independent coal:

Madeira, Hill & Co. (Philadelphia), Meeker & Co. (New York), J. S. Wentz & Co. (Philadelphia), W. A. Gosline & Co. (Toledo).

These railroad and independent coal companies sell direct to the retailers in carload lots, the retailers maintaining trestles or storage bins.

Several smaller local jobbers sell anthracite in the Detroit territory, either serving small retailers or catering to the steam-coal trade of industrial plants, etc. Some of them handle railroad and some independent coal. Industrial plants have lately been drawing more and more away from the jobbers and to a considerable extent are dealing with the producing companies.

There are 144 retail dealers in the city. Of these the 15 larger companies sold over 300,000 tons of anthracite in 1916.

Normal consumption of anthracite in Detroit.—It is estimated that Detroit requires in normal times from 600,000 to 700,000 tons of anthracite a year. The demand greatly increased during 1916, however, due to industrial growth and the consequent increase in population.

Extent and causes of shortage.—In Detroit and southern Michigan the chief cause of the shortage has been the slow movement of coal in transit.

It is said that the congestion of freight at the Toledo gateway is a serious factor. A similar congestion in the Detroit terminals has resulted in delays of several weeks after arrival of cars in the city before they were set upon the tracks of coal dealers. So serious has the local delay been that, it is claimed, bribery of brakemen has been resorted to in some cases to get cars set on a dealer's tracks. During the early fall the larger retail anthracite dealers had on hand stocks varying at the different yards from 25 to 85 per cent of normal. This was enough coal to care for current needs, and it is said that if coal had come through with little delay there would have been no trouble in meeting later demands.

The seriousness of the freight congestion at Detroit is illustrated by the statement of one dealer that he had the car numbers of nearly 100 cars of anthracite consigned to him which were in Detroit (Jan. 26, 1917), but which he could not get on account of the inability of the railroads to segregate this coal from the other freight and set it on his tracks.

The secondary cause of the shortage in Detroit, as in Chicago, was the abnormal demand brought on in September by failure of the consumers to buy during the summer and by the fear of a general railroad strike. Summer buying was discouraged by the omission of the usual April reduction in prices and the consumers were continually in hope that prices would later be lowered. The demand in the fall of 1916 would naturally have been greater than ever before, due to the record growth and expansion of local industries and the accompanying increase in population. It is true that several companies report a greater tonnage of anthracite delivered to consumers during the last four months of 1916 than during the same

period of 1915. Nevertheless, the irregularity and slowness of the receipt of coal, coupled with pressure of demand, resulted in unusual market conditions, as regards both supply and prices.

Bulk of wholesale business at circular prices.—The largest retailers purchased, as is their custom, from the railroad coal companies. They received during the last four months of 1916 enough coal to supply their regular customers without buying any considerable quantity of premium coal. Concerning the purchases of retailers from Madeira, Hill & Co., Meeker & Co., J. S. Wentz Co., and W. A. Gosline & Co., listed above as handling independent coal, the Commission did not secure enough information to make a statement showing how all of these four companies treated the retail trade. At least one of these companies sold to regular retail customers at or about circular during the last four months of 1916, while another is stated to have obtained premiums in the early fall and to have since abandoned premium operations and adopted railroad circular prices entirely. The former company is probably the chief factor in independent coal going to large Detroit retailers.

It appears, therefore, that during the shortage months of 1916 the greater part of Detroit's anthracite has been railroad coal or independent coal sold to dealers at railroad circular prices. The result has been a tendency to hold local retail prices somewhat below those obtained in the surrounding territory of southern Michigan, although prices have been higher than in normal times.

Mine premiums and jobbers' profits on premium coal.—The smaller retailers have found it more difficult to obtain coal. Several of the outside independent companies, also local jobbers handling independent coal, have supplied some anthracite to these smaller retailers at premium prices. Premiums paid by the dealers for this coal have varied from 15 cents to nearly \$4. Although this premium coal has not been a heavy factor in the local-price situation, it is deserving of attention, because it undoubtedly has helped to increase the price to the consumer.

An instance of the high premiums obtained is found in the case of a car of stove coal purchased by a local jobber in October from one of the large outside independent sales companies previously mentioned. The price paid by the jobber for this coal was \$5.80 per ton at the mines, a premium of \$1.70 per ton above the circular price of \$4.10. This car was turned over by the jobber to a small Detroit retailer at \$8 per ton f. o. b. mine, an advance of \$2.20, though in normal times this same jobber operates on a margin of about 15 cents per ton. The retailer therefore paid for this car of coal at the mines \$3.90 above the circular mine price. One November sale to a manufacturing plant in Detroit at \$8 per ton f. o. b. mine involved a total premium of \$3.65, of which the jobber received \$2.65 and the Philadelphia sales company from which he obtained the car received \$1. Other instances of a similar nature, with varying premiums, were found.

On the other hand, another Detroit jobbing company in the list above served its regular customers in the city, of which it has not many, at its customary advance over price paid, namely, 15 to 25 cents per gross ton.

An interesting case found in Detroit was the purchase of anthracite from an outside independent jobber, previously mentioned, for

which the retailer was charged circular price, on the condition that an equal quantity of bituminous coal be taken at the same time. A heavy premium was demanded on the bituminous coal.

The following table presents the monthly average of a few cases of premium sales to Detroit dealers and plants:

1916.	Prepared sizes, f. o. b. mine (average).			Steam sizes, f. o. b. mine (average).		
	Price paid.	Selling price.	Gross margin.	Price paid.	Selling price.	Gross margin.
September.....	\$3.95	\$4.10	\$0.15	\$2.50	\$3.15	\$0.65
October.....	4.89	6.60	¹ 1.71	3.75	4.50	.75
November.....	6.60	7.67	² 1.07	4.28	6.67	³ 2.39
December.....	4.85	7.00	2.15	.....	.....	.....

¹ Maximum, \$2.65; minimum, \$0.15.

² Maximum, \$2.20; minimum, sold at same price paid.

³ Maximum, \$3.90; minimum, \$1.50.

Retail prices.—The practice among Detroit retailers generally has been to reduce the price of anthracite to consumers 50 cents per ton in April, following the similar reduction in normal times by the railroad coal companies. In most other cities covered by the Commission's investigation, the normal practice is for retail prices to be increased 10 cents per ton each subsequent month, until the winter price is restored in September. Most Detroit companies restore the winter price by a 50-cent increase the 1st of September, others making the increase on October 1.

In the spring of 1916 the mine companies did not announce their usual April discount of 50 cents per ton. Instead, a discount of only 25 cents per ton was put into effect in May. Many Detroit retailers maintained their previous winter's prices without change until September, 1916. Others did not change their prices until October. In this way the retailer's gross margin was increased in May by the 25 cents discount in their purchase prices, and remained 25 cents above their normal gross margin from that time on. The changes in gross margin will be discussed in more detail on page 312.

As has already been stated, the large retail companies handled almost entirely railroad coal during the shortage, while many of the smaller retailers found it necessary to buy independent coal at varying premiums. Besides the variance in cost prices, the following conditions also affected the retail prices:

(1) Irregular receipts of coal, due to railroad congestion and local difficulties. For instance, a dealer whose yards are located on the Grank Trunk tracks could not get coal shipped to him over the Michigan Central because of the latter road's embargo against the Grand Trunk.

(2) Labor shortage and high wages, resulting in increased expenses of retailing coal. Difficulty was found in holding teamsters and yard men except at greatly advanced wages, on account of their ability to command better pay in local industrial plants.

(3) No retail coal dealer has a predominant position in the Detroit market, and there is no group of companies following the same price policy.

Three important retail companies delivered coal throughout the shortage period without a change of price other than the fall increase of 50 cents per ton, explained above. This increase was from \$8 to \$8.50 on stove and egg coal.

Other companies increased prices to the consumer. The small quantities of premium coal purchased by the larger retailers tended to raise their prices to some extent. Premium coal had a greater influence, however, on the prices of the smaller companies. The following circular prices illustrate the lack of uniformity in the quoted prices and in the dates of change of price among the larger dealers during the last four months of the year. The price prevailing in the winter of 1915-16 was \$8 per ton.

Published prices to consumers.

Stove coal.	Company.					
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
Sept. 1.....	\$8.50	\$8.00	\$8.50	\$8.50	\$8.50	\$8.50
Oct. 2.....	8.50	8.50	8.50	8.50	8.50	8.50
Oct. 15.....	8.50	8.50	8.50	8.50	8.50	9.00
Oct. 21.....	8.50	8.50	9.00	8.50	9.00	9.00
Oct. 28.....	8.50	8.50	9.00	8.50	9.00	9.00
Nov. 7.....	8.50	8.50	9.00	8.50	9.50	9.00
Nov. 13.....	8.50	8.50	9.00	8.50	10.00	9.00
Nov. 25.....	8.50	8.50	9.00	8.50	10.00	10.00
Dec. 26.....	8.50	9.50	9.00	8.50	10.00	10.00
Dec. 29.....	8.50	9.50	9.50	8.50	10.00	10.00
Dec. 31.....	8.50	9.50	9.50	8.50	10.00	10.50

The range of prices actually received on coal for household consumption, by these six representative companies and an additional concern rated among the smaller retail dealers, was as follows:

Range of prices actually received.

Stove coal.	Company No. 1.		Company No. 2.		Company No. 3.		Company No. 4.		Company No. 5.		Company No. 6.		Company No. 7.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
September.....	\$8.50	\$8.50	\$8.00	\$8.00	\$8.50	¹ \$8.00	\$8.50	¹ \$8.00	\$8.50	\$8.50	¹ \$8.00	¹ \$8.00	\$8.50	¹ \$8.00
October.....	8.50	8.50	9.00	8.50	9.00	18.00	8.50	8.00	9.00	8.50	9.00	18.00	8.75	¹ 8.00
November.....	8.50	8.50	9.00	9.00	9.00	9.00	8.50	18.00	10.00	9.00	9.50	9.00	11.00	¹ 8.00
December.....	8.50	8.50	9.50	9.00	9.50	9.00	8.50	18.00	10.00	10.00	10.25	18.00	11.00	¹ 8.00

¹ Coal delivered at summer prices, orders taken in the summer.

The general policy as to service and price adopted by each of these companies during the shortage was stated to be as follows:

Company No. 1: One price to all; old customers preferred as to delivery; considers it morally wrong to raise prices under conditions of extreme shortage and need, but states larger gross margins will be necessary hereafter to care for increased costs.

Company No. 2: One price to all.

Company No. 3: One price to all; refused everyone except regular customers and families with small babies since November 1; claimed higher margin of profit necessary to cover increased costs.

Company No. 4: One price to all; served only old customers.

Company No. 5: Prices allowed to follow the high prices of other dealers; prices often different to different consumers on the same day; preference in price and delivery given old customers.

Company No. 6: Price governed by supply on hand and available.

Company No. 7: Price governed by prices paid; old customers given the lower prices.

Another company raised the price \$1 a ton the latter part of December to all new customers, in an effort to discourage new trade and enable the company to care for and hold their old patrons. Several of these companies, and one not referred to above, had taken orders in the summer and were delivering coal at summer prices all through September and October, and even in some cases as late as December.

Following is a comprehensive tabulation of the cost prices, typical sale prices, and gross margins of representative retailers in Detroit during the period of shortage from September to December, inclusive, 1916. This table indicates the variation in gross margin realized during the different months and reflects the result of the shortage upon prices paid by the consumers and upon the gross profits of the retail dealers.

The cost price figures are the actual costs of coal purchased, weighted, with cost of coal on hand each month to obtain the average cost, f. o. b. the dealers' yards, of all the coal available for sale during the month. Sales prices, except in the case of company 7, are averages of a selection of typical sales during each period (see p. 83), and may be considered as the approximate average selling prices. Company No. 7 is the only one for which actual averages of all sales for each month are shown. There are three prices in each month for most of the companies, representing the average of typical prices around the 5th, 15th, and 25th of the month. In these cases three corresponding gross margins are shown for the same periods. Gross margins are computed by obtaining the difference between the average cost prices and the average typical sales prices.

TABLE 54.—*Detroit—Summary for 8 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September-December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 153.]

[See Table 55 for detail by companies.]

1916.	Broken.			Egg.		Stove.			Chestnut.			Pea (chestnut No. 2).			Buckwheat.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.
SEPTEMBER.																	
Cost price.....	\$5.85	\$5.85	\$5.85	\$6.35	\$6.29	\$6.30	\$6.21	\$6.33	\$6.50	\$6.34	\$6.52	\$5.35	\$5.36	\$5.36	\$4.02	\$4.02	\$4.02
Typical household sale price.....	8.00	8.00	8.00	8.50	8.50	8.50	8.05	8.05	9.00	8.14	9.25	7.75	7.75	7.75	5.50	5.50	5.50
Gross margin.....	2.15	2.15	2.15	2.35	2.35	2.35	1.62	2.29	2.66	1.58	2.69	2.39	2.39	2.39	1.48	1.48	1.48
Typical industrial contract sale price.....				7.63	7.63	7.63	7.24	7.64	7.97	7.97	7.97	7.97	7.97	7.97			
Gross margin.....				1.29	1.29	1.29	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41			
Typical yard sale price.....				7.25	7.25	7.25	7.25	7.25	7.25	7.50	7.50	7.50	7.50	7.50			
Gross margin.....				.96	.96	.96	.98	.98	.98	1.02	1.02						
OCTOBER.																	
Cost price.....	5.85	5.85	5.85	6.33	6.36	6.34	6.33	6.50	6.50	6.34	6.56	5.35	5.36	5.36	4.02	4.02	4.02
Typical household sale price.....	8.00	8.00	8.00	8.05	9.00	8.05	8.05	9.00	9.00	8.14	9.25	7.25	8.25	8.25	5.50	5.50	5.50
Gross margin.....	2.15	2.15	2.15	1.69	2.67	1.69	1.71	2.66	2.66	1.58	2.69	1.89	2.90	2.90	1.48	1.48	1.48
Typical industrial contract sale price.....				7.56	7.56	7.56	7.24	7.86	8.02	8.02	8.02	7.00	7.50	7.50			
Gross margin.....				1.20	1.20	1.20	1.41	1.41	1.41	1.41	1.41	1.65	2.15	2.15			
Typical yard sale price.....				7.75	8.25	7.75	7.75	8.25	8.25	8.00	8.50	7.00	7.50	7.50			
Gross margin.....				1.42	1.92	1.42	1.41	1.91	1.91	1.44	1.94	1.65	2.15	2.15			
NOVEMBER.																	
Cost price.....	5.85	6.12	6.11	6.34	7.02	6.36	6.34	6.56	6.56	6.31	6.57	5.35	5.36	5.36	3.79	4.02	4.01
Typical household sale price.....	8.00	8.25	8.06	8.06	9.00	8.25	8.20	9.25	9.25	8.50	9.50	7.40	8.25	8.25	5.00	6.00	6.00
Gross margin.....	2.13	2.15	1.35	2.66	2.66	2.66	1.81	2.90	2.90	1.94	2.71	2.04	2.90	2.90	1.21	1.98	1.98
Typical industrial contract sale price.....				7.58	7.58	7.58	7.24	8.00	8.15	8.15	8.15	7.50	8.50	8.50	4.50	4.50	4.50
Gross margin.....				1.21	1.21	1.21	.90	1.65	1.58	1.58	1.58	7.50	7.50	7.50	.71	.71	.71
Typical yard sale price.....				8.25	8.25	8.25	8.25	8.25	8.25	8.50	8.50	7.50	7.50	7.50			
Gross margin.....				1.91	1.91	1.91	1.91	1.91	1.91	1.94	1.94	2.15	2.15	2.15			
DECEMBER.																	
Cost price.....	6.06	6.15	6.12	6.31	6.56	6.34	6.34	6.56	6.56	6.36	6.57	5.35	5.36	5.36	4.02	4.02	4.02
Typical household sale price.....	8.00	8.25	8.06	8.25	9.50	8.50	8.25	9.50	9.50	8.50	9.50	7.75	8.50	8.50	6.00	6.00	6.00
Gross margin.....	1.94	2.10	1.96	1.91	3.16	1.91	1.91	3.16	3.16	1.94	2.94	2.33	3.15	3.15	1.98	1.98	1.98
Typical industrial contract sale price.....				7.66	7.66	7.66	7.24	7.92	7.92	7.63	7.63						
Gross margin.....				1.31	1.31	1.31	.90	1.56	1.56	1.07	1.07						
Typical yard sale price.....				8.25	8.75	8.25	8.25	8.75	8.75	8.50	8.75	7.50	7.75	7.75			
Gross margin.....				1.91	2.41	1.91	1.91	2.41	2.41	1.94	2.19	2.15	2.40	2.40			

TABLE 55.—*Detroit—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 8 representative dealers, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 54 for summary of this table.]

BROKEN.

	September.						October.					
	Class of business.						Class of business.					
	Household.			Industrial.			Household.			Industrial.		
	Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.	
Company No. 2.....	\$5.85						\$8.00	\$2.15				
Company No. 4.....												
Minimum.....	5.85	2.15					8.00	2.15				
Maximum.....	5.85	2.15					8.00	2.15				
Weighted average.....	5.85											
	November.						December.					
	Class of business.						Class of business.					
	Household.			Industrial.			Household.			Industrial.		
	Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.		Sale price.	Gross margin.	
Company No. 2.....	\$5.85						\$8.00	\$1.94				
Company No. 4.....												
Minimum.....	6.12	2.13					8.25	2.10				
Maximum.....	5.85	2.13					8.00	1.94				
Weighted average.....	6.11	2.15					8.25	2.10				

[illegible]

Actual average sales prices are shown for this company, instead of typical prices as in the case of the other companies.

	November.					December.				
	\$9.25	\$8.25	\$8.00	\$1.65		\$9.25	\$8.25	\$8.00	\$1.65	
Company No. 1.	\$6.35	\$2.90				\$2.89			\$7.92	\$1.56
Company No. 2.	6.34	2.90				2.89				
Company No. 3.	6.34	2.16				2.16				
Company No. 4.	6.34	2.06				2.06				
Company No. 5.	6.34	1.91				1.91				
Company No. 6.	6.34	1.86				1.86				
Company No. 7.	6.34	1.99				1.99				
Company No. 8.	6.34	2.06				2.06				
Minimum.	6.34	2.66				2.66				
Maximum.	6.56	2.90				2.90				
Weighted average.	6.34									

1 Actual average sales prices are shown for this company, instead of typical prices as in the case of the other companies.
2 Contract.

TABLE 55.—*Detroit—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 8 representative dealers, September — December, 1916—Continued.*

BUCK WHEAT COAL.

	September.						October.					
	Class of business.						Class of business.					
	Cost price.		Household.		Industrial.		Household.		Industrial.		Yard.	
			Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
Company No. 3.....	\$4.02	{	\$5.50	\$1.48			{	\$5.50	\$1.48			
			5.50	1.48				5.50	1.48			
			5.50	1.48				5.50	1.48			
Company No. 4.....	4.02											
Company No. 6.....												
Minimum.....	4.02		5.50	1.48								
Maximum.....	4.02		5.50	1.48								
Weighted average.....	4.02											
November.												
Company No. 3.....	\$4.02	{	\$5.50	\$1.48			{	\$6.00	\$1.98			
			6.00	1.48				6.00	1.98			
			5.50	1.48								
Company No. 4.....	4.02											
Company No. 6.....	3.79											
Minimum.....	3.79		3.00	1.21	\$4.50	\$0.71						
Maximum.....	4.02		5.00	1.21	4.50	.71						
Weighted average.....	4.01		6.00	1.98	4.50							

Cost prices.—Cost prices averaged fairly even for all companies during the entire period, due to the fact previously noted that the quantity of premium coal purchased by the larger companies was not great. The premium prices paid by one of the companies during the period raised its average purchase cost, so that the amount of its excess cost over the current railroad coal companies' circular prices paid by the other retailers ranged from 4 cents to 68 cents per ton.

Sales prices.—The table illustrates the lack of uniformity in price which has been referred to above. The difference in price among the companies was not so marked in September as in later months. In September, for instance, companies Nos. 5 and 8 sold egg coal to household trade at an average price of \$8, and companies 2 and 6 sold at \$8.50; in October the lowest average on this size coal was \$8.05 and the highest was \$9; in November the prices ranged from \$8.06 to \$9, and in December from \$8.25 to \$9.50. It is noteworthy that the company with the highest purchase cost was not always the one to obtain the highest average prices. It may be said, however, that the maximum individual sales prices entering into the averages were obtained by this company.

Gross margins.—Twelve Detroit retailers interviewed by the Commission's agents stated that their normal gross margin in 1915 was from \$1.70 to \$2 per net ton.

It is evident that in view of the general uniformity in average purchase prices paid by the various large companies shown in the table, those retailers showing the highest average selling prices made the highest gross margins. Companies Nos. 2 and 4, with sales prices remaining constant throughout the entire period covered, realized about their normal gross margin, while companies 1, 5, 6, 7, and 8 increased their respective margins by increasing their sales prices. The greatest increase in margins was made by companies 1, 5, and 8. Company No. 1 shows an increase from \$1.71 in September to \$2.65 in December on egg coal; from \$1.96 to \$2.89 on stove coal; from \$1.74 to \$2.94 on chestnut coal. Company No. 8 increased its margins in about the same proportion as company No. 1, while the increase by No. 5 was slightly less than either of these other two, although averaging nearly a dollar per ton.

The gross margins in October, November, and December should be compared with those in September, which may in general be assumed to be normal. Such a comparison indicates that during the panic months two of the companies included in the table maintained their normal margin, while the six others increased their margins to a considerable or, in some cases, a marked extent.

Prices and shortage in southern Michigan territory outside of Detroit.—Prices were very high, both wholesale and retail, in southern Michigan points outside of Detroit. These places are less advantageously situated as regards transportation facilities, most of them being off the main line, and they lack the advantages of an industrial center. Many of the shipments passed through Detroit en route, and these shipments were subject to the delays incident to local congestion at that point, in addition to the many delays previous to arrival at Detroit. Many of the retailers serving the smaller places do not purchase regularly from the railroad coal

companies, and it is said that they depended mainly upon Detroit jobbers during the shortage.

The jobbers undoubtedly obtained premiums for coal sold in this outside territory. For instance, pea coal was purchased by a Detroit jobber in November from an independent source. The price paid was \$3.15 per ton at the mine, slightly under the railroad circular price, which was \$3.25 at the mine. This coal was sold to a Michigan retailer on the basis of \$4.25 at the mines, a premium price of \$1 above circular, and a gross profit for the jobber of \$1.10 per ton.

It should be explained in this connection that in normal times the jobber bases his margin of profit largely on the credit standing of the retailer, and his margins may fluctuate considerably among the various retailers who deal with him. This variation according to credit risk becomes doubly necessary at a time of uncertainty such as has recently existed.

Beyond this credit basis, however, there is apparently no governing rule. Sales seemingly were made in a large number of cases at the best price obtainable.

Some cases are on record where the anthracite passed through the hands of several jobbers, each realizing a premium profit before it finally reached the retailer. As an example, in October a Detroit jobber bought egg coal from a large independent coal sales company of Philadelphia, paying \$6.50 per ton f. o. b. Buffalo. This was a premium of 40 cents per ton to start with, the circular price being \$6.10 Buffalo. The Detroit jobber turned the coal over to another local jobber at \$8 per ton, and this last jobber sold it to a Michigan retailer at still another advance. Under such conditions of distribution, supplemented by irregular and uncertain railroad deliveries, the prices paid by the consumer in places around Detroit rose to a notable degree, reports being made of prices as high as \$12.

Detroit jobbers selling in southern Michigan territory.—The following table covers average prices of purchase and sale of two typical Detroit jobbers to retail dealers in southern Michigan territory and indicates at least one of the causes of high retail prices during the shortage months of 1916, when it is considered that in normal times these jobbers get a gross margin of from 10 to 25 cents per ton.

TABLE 56.—Average gross margins of representative Detroit jobbers selling to retailers in southern Michigan.

[Railroad coal and jobber coal shown separately. Gross margin, per gross ton.]

Market.	Jobber.	Source of coal.	Size of coal.	Percentage of all business, September–December.	1916			
					September.	October.	November.	December.
Detroit.....	No. 1....	Railroad	Prepared....	58	\$0.199	\$0.288	\$0.302	\$0.441
	No. 1....	do.	Steam.....	3		.500	.614	.500
	No. 1....	Jobber	Prepared....	14		.377	.141	.317
	No. 1....	do.	Steam.....	25		.898	.872	.741
	No. 1....	Weighted average, all business.	All.....	100	.199	.494	.557	.480
Detroit.....	No. 2....	Jobber	Prepared....		.150	1.710	1.070	2.150
	No. 2....	do.	Steam.....		.650	.750	2.390	

As stated, the normal margin realized by these jobbers is from 10 to 25 cents, slightly more in some cases, depending upon credit standing of the retailer to whom the coal is sold. In September the average gross margin was hardly above normal, but from that time on the margin increased.

Margins obtained by jobber No. 1 are shown for both railroad coal and coal purchased from other sources. Beginning with a margin of \$0.199 in September on railroad coal, prepared sizes, on about 58 per cent of the entire business, the margin gradually increased to \$0.441 in December. No railroad coal, steam sizes, was handled in September, but margins averaged \$0.500, \$0.614, and \$0.500 during October, November, and December, respectively.

Coal purchased of other jobbers, steam sizes, showed substantial margins of \$0.898, \$0.872, and \$0.741 from October to December. The small average gross margin of \$0.141 realized in November on jobber coal, prepared sizes, was due to an actual loss of 65 cents on a car which was refused by the original purchaser and resold at a loss.

Jobber No. 2 handled anthracite as a side line, and sold carload lots in Detroit and vicinity. The margins given in this table represent the profits per gross ton on about 20 carloads of coal, the total amount sold by this company in Detroit from September to December.

The margins entering into these averages varied and the maximum and minimum gross margins are indicative of the uncertainty of market conditions. Another tabulation is therefore presented below, showing the maximum and minimum gross margins per gross ton received on the sales which were combined to produce the above averages:

	Maximum.	Minimum.		Maximum.	Minimum.
Prepared sizes:			Steam sizes:		
September, 1916.....	¹ \$0.50	¹ \$0.10	September, 1916.....	.....	.....
October, 1916.....	¹ 1.50	1.15	October, 1916.....	² \$1.10	² \$0.30
November, 1916.....	1.95	2.65	November, 1916.....	² 1.25	1.30
December, 1916.....	¹ 1.00	1.15	December, 1916.....	² 1.10	2.25

¹ Railroad coal.

² Jobber coal.

³ Jobber coal; loss.

CHICAGO.

Transportation.—Anthracite coal comes to Chicago, mostly via Buffalo, by lake or over the following railroads:

Pennsylvania, Erie, New York Central, New York, Chicago & St. Louis, Baltimore & Ohio, Michigan Central, Grand Trunk, Flint & Pere Marquette, Wabash.

The distance from Buffalo to Chicago differs via the various roads, the short-line mileage being 523 miles. Under normal conditions the time of movement of anthracite from the mines to Chicago is from five to eight days. According to a statement by a representative of the Chicago Association of Commerce to the Interstate Commerce Commission on December 18, 1916, the average time of movement of 384 cars of anthracite via the different lines from Buffalo to Chicago during the period from November 1 to December 10, 1916, ran from 7.1 by the road having the lowest average time to 15.2 days by the

road having the highest average. Toward the close of the year, the movement of anthracite is reported by dealers to have taken a month or upward. The freight rate on anthracite from the mines to Chicago by rail via Buffalo is \$3.75 per gross ton on prepared sizes and \$3.50 per gross ton on pea and smaller sizes. The normal rate from the mines via Buffalo or Erie by lake to Chicago was \$2.35 per ton on contract cargoes, but during 1916 it rose to as much as \$3 per ton.

Sources of supply, and local distribution.—The great bulk of all anthracite consumed in Chicago and vicinity during 1916 was shipped there by the railroad coal companies. The so-called independents in normal years do not reach the Chicago market at all.

The following are the railroad coal companies and their principal agents or representatives, doing a wholesale business in Chicago:

Philadelphia & Reading Coal & Iron Co. (P. & R. R. R.); Lehigh Valley Coal Sales Co., selling for the Lehigh Valley Coal Co. (L. V. R. R.); Williams & Peters, sales agents for the Pennsylvania Coal Co. and Hillside Coal & Iron Co. (Erie R. R.); O. S. Richardson Coal Co., handling Susquehanna Coal Co.'s coal (Pa. R. R.); E. L. Hedstrom & Co., sales agents for the Delaware, Lackawanna & Western Coal Co. (D., L. & W. R. R.); S. C. Schenck & Co., sales agents for the Delaware, Lackawanna & Western Coal Co. (D., L. & W. R. R.); Globe Coal Co., sales agents for the Scranton Coal Co. (N. Y., O. & W. R. R.); Eureka Coal & Dock Co., sales agents for the Scranton Coal Co. (N. Y., O. & W. R. R.).

In 1915 the anthracite storage capacity at the 13 Chicago docks of the producing companies and their sales agents amounted to 624,000 tons, or about 75 per cent of the lake receipts of anthracite at Chicago during that year. The 9 rail yards of the same companies during 1915 had a storage capacity for anthracite of 56,700 tons. This appears to indicate that the receipts of all-rail anthracite by agents of the producing companies at Chicago are chiefly current. During December, 1916, and January, 1917, the daily stocks of anthracite received at the rail yard of a leading producing company were depleted each day a few hours after arrival of the shipments, peddlers' wagons lining up at the gates as early as 4 o'clock in the morning. While the storage facilities for all-rail coal of the producing companies appear to be limited, there are 350 track yards within the Chicago city limits operated by large retailers, some of whom also do a wholesale business. At no time during 1916 were large quantities of anthracite stored in these yards, according to reports from dealers, and this was verified in many cases by inspection of their records by the Commission's agents.

In Chicago there are about 18 wholesalers and jobbers of importance. They recently organized the Chicago Coal Exchange. The bulk of their business consists in handling bituminous coal, anthracite being more of a side line. Only the larger wholesalers have dock or rail yard facilities, the others selling most of their coal before buying it and having it shipped directly to their customers, many of whom are in cities and towns outside of Chicago. Chicago jobbers get their supply of anthracite mostly on contracts with the railroad coal companies through the latter's docks or yards in Chicago or from the mines direct. To some extent, they purchased in the open market during the fall and winter, when the supply of the railroad coal companies was not adequate to meet the increased demand.

The retail anthracite trade in Chicago is conducted by approximately 250 retail dealers, operating 350 track yards. The annual tonnage of anthracite of the average retail dealer varies from 2,000 to 50,000 tons each. They sell chiefly to domestic trade in lots of from one-fourth ton up, and to customers residing within a 3-mile limit. The Consumers' Co. is by far the largest dealer. It does both a wholesale and retail business, its total anthracite tonnage for 1916 approximating 400,000 tons. It handles anthracite coal in 60 of its 104 active coal yards. Besides selling to the better class of household trade, the Consumers' Co. also supplies anthracite to municipal and county institutions, hotels, office buildings, and the elevated railroad.

It is estimated that there are about 3,500 coal peddlers in Chicago, each of whom does an annual business of less than 2,000 tons. They usually do a moving and express business on the side. The peddlers buy their coal as a rule at the nearest wholesale or retail yard, and resell it in fractional ton lots and by the bag (100 pounds) or bushel (80 pounds). The average peddler has no storage facilities. Almost all peddled coal is sold for household use.

Local consumption of anthracite.—It is estimated that the consumption of anthracite in Chicago and the territory served by it in 1915 was about 3,000,000 tons. In 1916 the total quantity handled in Chicago and adjacent territory is estimated by the Commission, on the basis of reports covering practically all the producing companies and independent shippers, at about three and one-half million tons.

The annual consumption of bituminous coal in Chicago is far in excess of this, being estimated at no less than 23 million tons. For several years the increase in the consumption of anthracite in the city had not been keeping pace with the increase of bituminous. Many householders had turned to the use of smokeless bituminous coals, particularly those from the Pocahontas and New River fields of West Virginia. During 1915 and 1916 the increased exportation of these Pocahontas and New River coals had reduced the supply available for use in this country, and so far as Chicago is concerned had created an increased household demand for Illinois coals and for anthracite. This, with the increase in manufacturing requirements and the recent scarcity and sharp rise in price of all bituminous coal, resulted in an unusually strong demand for anthracite coal in the latter part of 1916.

Local shortage and its causes.—The main factors which brought about shortages from time to time in anthracite coal in Chicago during the fall and winter of 1916 were decreased receipts of lake coal during the season of navigation; car shortage, freight congestion, and coal embargoes, as far as the rail shipments were concerned; and a marked increase in demand, both real and artificial, over former years.

The unsettled conditions in the spring of the year at the mines and the delay in issuing wholesale-price circulars had caused many dealers, as well as consumers, to defer stocking their yards or providing for their consumption earlier in the year. The dealers were therefore unprepared fully to meet the sudden demand which developed toward the close of August as a result of the threatened railroad strike. About the same time congestion of traffic facilities be-

came acute. Beginning with the middle of October, every railroad shipping coal into Chicago had, at one time or another, an embargo on coal anywhere from one to three weeks. Even the Chicago Belt Line was embargoed for a short period. A panic scare developed, increased very materially by sensational newspaper reports of an impending coal famine, and resulted in retail dealers being swamped with orders which they could not fill at once and fully.

The receipts of anthracite by lake at the Chicago docks in 1915 were 831,761 net tons, and in 1916 were only 679,998 tons, a falling off of over 150,000 tons, or 18 per cent. Statistics of the tonnage of all-rail shipments of anthracite are not available. Since Chicago territory appears to have consumed four or five hundred thousand tons more in 1916 than in 1915, the falling off in lake receipts of anthracite must mean that the all-rail anthracite increased to the extent of some five or six hundred thousand tons. At any rate, the dock coal was all exhausted at the close of December instead of lasting, as usual, through the winter; and all-rail routes had to be mainly depended on during the season on account of the difficulty of getting lake coal to Chicago.

If the total increase in the anthracite consumption of the city in 1916 is taken at 500,000 tons, this would amount to an increase of about 15 per cent, which, under the increase in real demand, might well indicate an actual shortage. Whether or not a shortage existed for the year as a whole, there was certainly a shortage at particular times, due to difficulty in getting supplies promptly and to the panic fear of the public. The times of most pronounced shortage were the latter parts of December and January.

Producers and shippers.—The four factors which affect anthracite prices in Chicago from the producer to the consumer are the producers and shippers, wholesalers other than sales agencies of operators, retailers with yards, and peddlers.

The railroad coal companies who produce and ship anthracite to Chicago, besides being operators and carriers, serve also as local distributors to dealers, both directly through their own yards and docks, like the Philadelphia & Reading Coal & Iron Co., the Lehigh Valley Coal Sales Co., and indirectly through firms acting as their sales agents, like E. L. Hedstrom and the S. C. Schenck Coal Co. (both representing the Delaware, Lackawanna & Western), and Williams & Peters, representing the Pennsylvania Coal Co. (Erie). The branch offices of the producing companies have limited sales territories and are in charge of sales agents on a salaried basis. In the cases in which a firm acts as sales agent, the business is done on commission.

A considerable proportion of the coal sold by the railroad coal companies in Chicago is sold on consignment contract, that is, is delivered by the companies or their agents to wholesalers or to retailers in the capacity of factors, who do not at any time acquire title to it, but who effect sales of it and transmit to the producing companies or their agents an agreed amount per ton, less a commission for finding the customer, providing yard storage for the coal till sold, guaranteeing the credit risk on sales not made for cash, etc.

From evidence gathered by agents of the Commission it appears that in Chicago the railroad coal companies did not sell above their circular prices. In the winter, however, some of them did increase

their circular prices 25 cents per ton. Williams & Peters advanced their prices 25 cents per ton on all sizes, except pea and buckwheat, as early as December 8, 1916. The Lehigh Valley Coal Sales Co. and the Susquehanna Coal Co., on January 1, 1917, and the Philadelphia & Reading Coal & Iron Co., on February 15, 1917, announced a similar advance. (See, however, p. 119.) Considering the large tonnages handled by these companies, this relatively small increase was important.

While it is true that the railroad companies made the aforementioned advance in their circular prices, they, on the whole, exercised a steadying influence on the market during the fall and winter, and did not take the advantage that they might have taken of the abnormal situation. At the yards of a sales agency of one railroad coal company the prices to peddlers' wagons were considerably lower during the coal shortage in January than the current circular prices, although the supply at this company's yard was at no time equal to the increased demand.

Independent producers increased their prices greatly during the period of coal shortage in Chicago. During times of the most acute difficulty, when the railroad coal companies had no stocks on hand and disposed of their incoming supplies immediately after arrival, independent operators took the opportunity to charge as high prices as the market would bear. The fact that some railroad coal companies and their sales agents at times refused to sell anthracite to new customers and outsiders, and were not able to meet the increased demand of old customers, forced dealers to purchase in the open market, where they bid any price at which coal was to be had from the independents, the highest bidder getting the coal. Thus a large Chicago dealer had to buy 20 cars at premium to accommodate some old customers, because a certain railroad coal company failed to deliver on contract.

The total tonnage of anthracite which came into the Chicago market at premium prices as far as agents of the Commission could establish from the records of the shippers, was about 25 per cent (see p. 158) of the total tonnage of anthracite handled, and the premium ranged from 32 cents to \$1.92 per gross ton. Yet the fact remains that during the intermittent periods of acute coal shortages, when premium coal was sold, its effect was all the more marked. As an instance of premium coal coming into Chicago, it may be mentioned that, while on September 15, 1916, an eastern coal jobber sold independent chestnut coal to a leading Chicago wholesaler at \$4.35 per gross ton at the mines, the same company on November 22, 1916, sold chestnut coal to the same Chicago dealer at \$6.75 per ton, an increase of \$2.40 per ton within two months. Pea coal was sold by the same independent jobber at \$2.90 per ton in September and at \$4.50 in November. During November, December, and January an independent producing company shipped on an average three cars per week of premium coal to Chicago, totaling about 3,000 tons, which was sold to local jobbers at from \$8 to \$9 per net ton.

The wholesale circular prices of the railroad coal companies for anthracite f. o. b. cars Chicago are shown in the following table for the period from September, 1916, to February, 1917, inclusive:

TABLE 57.—*Wholesale circular prices per net ton f. o. b. cars Chicago, for 5 railroad coal companies.*

Kind.	1916				1917	
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Broken:						
Lehigh Valley Coal Sales Co.....	\$6.85	\$6.85	\$6.85	\$6.85	\$7.10	\$7.10
Williams & Peters (Penna. Coal Co.).....	6.85	6.85	6.85	7.10	7.10	7.10
O. S. Richardson Coal Co. (Susq. Coal Co.).....	6.85	6.85	6.85	6.85	6.85	6.85
S. C. Schenck Co. (D., L. & W. Coal Co.).....	6.85	6.85	6.85	6.85	7.10	7.10
Philadelphia & Reading Coal & Iron Co.....	6.85	6.85	6.85	6.85	6.85	7.10
Egg:						
Lehigh Valley Coal Sales Co.....	7.10	7.10	7.10	7.10	7.35	7.35
Williams & Peters (Penna. Coal Co.).....	7.10	7.10	7.10	7.35	7.35	7.35
O. S. Richardson Coal Co. (Susq. Coal Co.).....	7.10	7.10	7.10	7.10	7.35	7.35
S. C. Schenck Co. (D., L. & W. Coal Co.).....	7.10	7.10	7.10	7.10	7.35	7.35
Philadelphia & Reading Coal & Iron Co.....	7.10	7.10	7.10	7.10	7.10	7.35
Stove:						
Lehigh Valley Coal Sales Co.....	7.10	7.10	7.10	7.10	7.35	7.35
Williams & Peters (Penna. Coal Co.).....	7.10	7.10	7.10	7.35	7.35	7.35
O. S. Richardson Coal Co. (Susq. Coal Co.).....	7.10	7.10	7.10	7.10	7.35	7.35
S. C. Schenck Co. (D., L. & W. Coal Co.).....	7.10	7.10	7.10	7.10	7.35	7.35
Philadelphia & Reading Coal & Iron Co.....	7.10	7.10	7.10	7.10	7.10	7.35
Chestnut:						
Lehigh Valley Coal Sales Co.....	7.35	7.35	7.35	7.35	7.60	7.60
Williams & Peters (Penna. Coal Co.).....	7.35	7.35	7.35	7.60	7.60	7.60
O. S. Richardson Coal Co. (Susq. Coal Co.).....	7.35	7.35	7.35	7.35	7.35	7.35
S. C. Schenck Co. (D., L. & W. Coal Co.).....	7.35	7.35	7.35	7.35	7.60	7.60
Philadelphia & Reading Coal & Iron Co.....	7.35	7.35	7.35	7.35	7.35	7.60
Pea:						
Lehigh Valley Coal Sales Co.....	5.80	5.80	5.80	5.80	6.05	6.05
Williams & Peters (Penna. Coal Co.).....	6.00	6.00	6.00	6.25	6.25	6.25
O. S. Richardson Coal Co. (Susq. Coal Co.).....	5.80	5.80	5.80	5.80	6.05	6.05
S. C. Schenck Co. (D., L. & W. Coal Co.).....	6.00	6.00	6.00	6.00	.....	.....
Philadelphia & Reading Coal & Iron Co.....	6.00	6.00	6.00	6.00	6.00	6.00
Buckwheat No. 1:						
Lehigh Valley Coal Sales Co.....	.....	.....	.....	.....	.....	.....
Williams & Peters (Penna. Coal Co.).....	.....	.....	.....	.....	.....	.....
O. S. Richardson Coal Co. (Susq. Coal Co.).....	4.25	4.25	4.25	4.25	5.00	5.00
S. C. Schenck Co. (D., L. & W. Coal Co.).....	4.25	4.25	4.25	4.25	.....	.....
Philadelphia & Reading Coal & Iron Co.....	.....	.....	.....	.....	5.00	5.00

The circular prices here shown of these five railroad coal companies show little variation. The difference in the Williams & Peters prices for December is due to this company making its price increase effective on December 8, 1916; whereas the other companies made their price increase effective about January 1, 1917.

Wholesalers, other than operators and their sales agencies.—There are wholesalers in Chicago with permanent storage capacity in rail yards or docks, and wholesalers without permanent storage capacity. The terms "dock or yard wholesaler" and "jobber" may be used to indicate these two classes of dealers. Wholesaling from storage docks or yards involves physical handling and reloading of the coal and the expense incident thereto. In jobbing the coal goes direct from the mines to the retailer or industrial consumer and only selling expense is entailed by the jobber. The dock or yard wholesaler may sell from his yard or dock in carload lots or to retailers' and peddlers' wagons, or both; but the jobber deals in car lots only. Some of the dock and yard wholesalers, notably the Consumers' Co., also are themselves retailers.

The dock and yard wholesalers are generally bound by long-time contracts with the railroad coal companies or their selling agents, many receiving coal on consignment in the manner described above. The railroad coal companies reserve the right to sell at wholesale in the same territory with their consignment factors. The factors are supposed to sell at the circular wholesale price of the railroad companies, and to return this price to the companies less the commission

which is in the form of a discount from circular. This discount, which thus represents the gross margin of the dock and yard wholesaler, is commonly from 50 cents to 55 cents a ton on prepared sizes and 25 cents on steam sizes. These may be said to represent their normal gross margins.

The railroad coal companies generally stand the loss of degradation, but in at least one contract the degradation loss falls on the dealer and a much higher discount is allowed him on that ground.

The following table shows the actual gross margin derived from the books of two storage wholesalers in Chicago for the last four months of 1916, being the difference between their purchase price, or consignment remittance, and their selling price:

Gross margin per gross ton on anthracite for two Chicago dock companies.

Dock company.	Source of coal.	Size of coal.	Percentage of all business, September-December.	1916			
				Sept.	Oct.	Nov.	Dec.
No. 1 ¹	Railroad, weighted average, all business.	All....	100	\$0.979	\$1.198	\$1.715	\$2.560
No. 2 ²	Railroad (consignment), weighted average, all business.	...do...	100	.560	.560	.560	.560
Total tonnages sold.....				17,306	30,067	22,173	16,816

¹ Gross margins include degradation.

² Gross margins exclude degradation.

Dock company No. 1, whose gross margins are shown in the above table, handles over his dock only railroad coal on consignment. This margin covers all dock and selling expenses, including loss due to degradation.

The large quantity of coal sold during September and October makes it appear that it was necessary to sell below circular prices in order to meet competition; while in November and December, with a much smaller supply, it was comparatively easy to dispose of coal at premium prices, realizing gross margins which were much larger than the normal margin.

Dock company No. 2 handles railroad coal on consignment, receiving a commission of \$0.56 per gross ton on all sizes. This commission does not include a degradation charge but is supposed to cover all dock and selling expenses.

The jobbers or car wholesalers form a class by themselves, inasmuch as they either have no storage capacity at all or else only occasionally rent storage. As a rule they have no long-time contracts with shippers and producers. They buy in the open market at the lowest price and sell at the highest price obtainable. The railroad coal companies generally allow Chicago jobbers a discount of 25 cents per ton from their circular.

The jobbers, or car wholesalers, in addition to the independent operators, were very largely responsible for premium wholesale prices in Chicago. During the intermittent period of coal shortage individual scalpers in certain cases made use of the opportunity to supply coal at premium prices to dealers whose stock had been depleted. One jobber stated that he had handled as much as 2,500 tons at premium, his total tonnage for the year being 22,000 tons. However, these comparatively small quantities of premium coal

usually appeared at the psychological moment when demand was strong and supplies low, so that they set the wholesale spot price for the time being. When fresh shipments sufficient to meet the demand came in and were sold at circular prices, premium coal was wiped out. Another function of some jobbers seems to have been to keep as much coal as possible "on the run" or in cars at various railroad yards, for the purpose of reconsigning it to other places where better prices were to be had. The Illinois Public Utilities Commission held extensive hearings on this phase of the Chicago situation and increased demurrage charges with a view to remedying this situation.

Some jobbers make a practice of buying anthracite in gross tons at the prevailing circular price and selling it at the same price in net tons. The difference constitutes the gross margin on which such jobbers do business. Such a margin, calculated on circular f. o. b. the mines for Chicago shipments, would have amounted during the last four months of 1916 to 47 cents per net ton on broken; 50 cents on egg and stove; 54 cents on nut, and 39 cents on pea.

The Commission obtained data sufficient to calculate the gross margins on the anthracite jobbing business of the following, the names being arranged alphabetically and not in the order of the numbers in the table:

Atlas Coal Co.; Castner, Curran & Bullitt; Consolidation Coal Co.; Globe Coal Co.; Mitchell & Dillon Coal Co.; Peabody Coal Co.

TABLE 58.—Gross margin per gross ton on anthracite for 6 Chicago jobbers.

Jobber.	Source of coal.	Size of coal.	Percentage of all business, September to December.	1916			
				September.	October.	November.	December.
No. 1.....	Railroad (consignment).....	Prepared..	89	\$0.560	\$0.560	\$0.560	\$0.560
Do.....	do.....	Steam.....	8	.477	.444	.477	.477
Do.....	Railroad (other than consignment).	Prepared..	1	.285	.280	.281	.286
Do.....	do.....	Steam.....	2	.369	.266	1.400	.....
Do.....	Jobber.....	Prepared..	2	.369	.266	.320	.356
Do.....	do.....	Steam.....	2	.280	.280	.280	.....
Do.....	Weighted average, all business.	All.....	100	.545	.539	.549	.547
No. 2.....	Railroad (other than consignment), ¹ weighted average, all business.	do.....	100	.180	.226	.557	.411
No. 3.....	Railroad.....	Prepared..	35	.374	.356	.361	.447
Do.....	do.....	Steam.....	9	.286	.277	.397	.698
Do.....	Jobber.....	Prepared..	38	.270	.299	.305	.461
Do.....	do.....	Steam.....	18	.190	.316	.....	.373
Do.....	Weighted average, all business. ²	All.....	100	.286	.320	.338	.460
No. 4.....	Jobber.....	Prepared..	58	.478	.434	.629	.675
Do.....	do.....	Steam.....	42	.451	.492	.409	1.273
Do.....	Weighted average, all business.	All.....	100	.469	.458	.505	.772
No. 5.....	Jobber.....	Prepared..	90	.....	.313	.510	.535
Do.....	do.....	Steam.....	10	.....	.301	.519	.600
Do.....	Weighted average, all business.	All.....	100	.....	.311	.511	.536
No. 6.....	Jobber.....	Prepared..	75	.....	.....	.....	1.424
Do.....	do.....	Steam.....	25	.....	.....	1.326	.412
Do.....	Weighted average, all business. ³	All.....	100	.....	.....	1.326	.690
Total ton-nages sold.	.....	.....	.....	59,012	66,285	69,617	67,400

¹ Including about 8 per cent jobber coal.

² Margins figured on typical purchases and corresponding sales only—probably 10 per cent of total business.

³ Only small tonnage handled.

The first concern shows practically stable margins throughout the period, viz, 56 cents for prepared and 47 cents for steam sizes. The remainder of its business, which is but 3 per cent, shows margins from \$0.28 to \$1.40. This represents coal bought and sold in the open market, which is but 3 per cent of this company's business, its main business being the handling of railroad coal company coal on a fixed consignment basis.

The margins of jobbers Nos. 2, 3, 4, and 5 show a distinct advance throughout the period, except for slight decreases in October. The highest point was reached in December. A closer inspection of the figures of concern No. 2 shows that the gross margin on its entire jobbing business had an upward trend, advancing from \$0.180 in September to \$0.226 in October and to \$0.557 in November, with a slight decline to \$0.411 in December. The margin of jobber No. 3 on prepared sizes dropped from \$0.374 in September to \$0.356 in October, and then went up to \$0.361 in November and reached \$0.447 in December. A more decided advance was made by the margin of jobber No. 4, which decreased from \$0.478 in September to \$0.434 in October, and then jumped to \$0.629 and \$0.675 in November and December. Jobber No. 5 increased his margin from \$0.313 in October to \$0.510 in November and to \$0.535 in December, while jobber No. 6 had a margin of \$1.424 on prepared sizes in December.

Prepared sizes constituted from 35 to 90 per cent of the entire business, while steam sizes made up from 9 to 42 per cent of the turnover of these six jobbers.

Though smaller in volume, the sales of steam sizes show a much more violent fluctuation in the margins than the prepared sizes. While the margins of some jobbers were smaller in September on steam sizes than on prepared sizes, in December the margins on steam sizes with most jobbers were the larger. The margin of concern No. 1 on steam sizes was \$1.40 in November. Jobber No. 3 did business on gross margins of \$0.374, \$0.356, \$0.361, and \$0.447 on prepared sizes, but in steam coal his margins were \$0.286, \$0.277, \$0.397, and \$0.698, showing an increase of 150 per cent as between October and December. Concern No. 4 trebled its margin on steam sizes from September to December; No. 5 doubled it, while the highly speculative No. 6 realized \$1.326 in November and only \$0.412 in December. This violent upward trend of the margins on steam sizes may be accounted for in the first place by the greatly increased demand of manufacturers for anthracite, who were unable to secure bituminous coal. The great increase in the price of bituminous coal reflected itself in the price levels of anthracite steam coal. On the other hand there was an increased demand from household consumers for pea coal.

The drop in October margins was accompanied by a 20 per cent increase in the tonnage sold. Only a slight increase in the tonnage sold took place as between October and November, while the December sales dropped from 85,090 to 80,432 with a simultaneous and marked increase in the margins. With an increased demand owing to cold weather in December, with Lake transportation closed, and a shortage at the docks as well as slow rail movement, the jobbers were able to obtain high prices.

Retailers' prices.—An outstanding feature of the retail anthracite trade in Chicago consists in the fact that the Consumers Co., the leading anthracite retailer in Chicago, with its large annual tonnage and the great number of yards operated by it in every part of the city, practically sets the price which most of the other local retailers follow. It appears to be customary throughout the city for retailers daily to inquire by telephone for the Consumers Co.'s prices in order to get a lead on the prevailing market. The following tabulation indicates the retail prices of the Consumers Co., according to its printed circulars, from September 1, 1916, to February 1, 1917.

Size.	1916					1917
	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Increase Dec. 1 over Sept. 1.	Feb. 1.
Broken.....	\$8.25	\$8.50	\$9.00	\$10.00	\$1.75	\$9.50
Egg.....	8.50	9.00	9.50	10.50	2.00	9.50
Stove.....	8.50	9.00	9.50	10.50	2.00	9.50
Chestnut.....	8.75	9.50	9.50	10.50	1.75	9.50
Pea.....	7.40	7.80	8.50	9.50	2.10	8.50
Buckwheat No. 1.....	6.00	6.50	7.00	8.00	2.00	7.00

According to the above table, the total increases in circular prices from September 1 to December 1 varied from \$1.75 to \$2.10 per ton. Advances ranging from 25 cents to \$1 per ton were made each month on each size, with one exception, the price of chestnut remaining stationary at \$9.50 per ton during October and November. The steady advance in retail prices beginning September 1 was explained by the Consumers Co. as due to increased wages, inefficient labor, shortage of supply, and increased costs in general. On February 1, 1917, the retail circular prices dropped \$1 on all sizes except large egg or broken, on which it dropped 50 cents per ton. This decrease on February 1 took place shortly after the panic scare appeared to have reached a crisis and despite an advance in teamsters' wages effective on January 26, 1917, resulting from a coal teamsters' strike—at a time when an advance rather than a decrease in prices might have been expected, if the previous increases were due to the causes assigned.

Among the few retailers whose prices were lower than those of the Consumers Co. is a South Side dealer, whose circular sales prices for anthracite from September to January are indicated in the following tabulation:

Size.	1916				
	September.	October.	November.	December.	Increase December over September.
Egg.....	\$8.35	\$8.75	\$9.00	\$9.00	\$0.65
Stove.....	8.35	8.75	9.00	9.00	.65
Chestnut.....	8.60	9.00	9.25	9.25	.65
Pea.....	7.35	7.50	7.75	7.75	.40
Buckwheat No. 1.....	6.00	6.00	6.00	6.00	.....

According to the foregoing table the increase in the retail sales prices of this firm for December over those of September amounts to from 40 cents to 65 cents per ton. While the October and November prices show slight increases, the December prices remained the same as those of the previous month. The December prices of this dealer were from \$1.25 to \$2 below the retail circular prices of the Consumers Co.

A small retailer in Chicago purchased his anthracite from one of the railroad coal companies at \$1.25 per ton less than the Consumers Co. sold the same grade wholesale, under the condition that he sell it cheaper than the Consumers Co.'s retail price. This dealer sold chestnut at \$8.25 per ton in January, while the Consumers Co.'s price was \$10.50.

Apparently few retailers undersell the Consumers Co., but it seems that the increase made in retail price by the Consumers Co. was taken advantage of by many dealers to increase their margin. In a general way it can be said that, except for the instances just stated, no wide range in the prices of the different retail dealers was noticeable.

An inspection of the books of representative retail dealers by agents of the Commission showed that the selling prices of some retailers vary considerably to different customers. In some cases a difference of \$1 per ton was charged on the same size of anthracite to different customers on the same day. An explanation frequently offered for this was that one was a regular customer while the other was not. In some cases a longer distance for hauling was offered in explanation, while credit standing accounted for the variation in others. Further explanation of such varied retail prices on the same day may be found in the poor delivery facilities of many retailers. Few of them can sell beyond the 3-mile zone, and most of them cater to a certain restricted class of customers. Longer hauls would increase their teaming expenses disproportionately. The Consumers Co. with its many coal yards distributed throughout the city, is the only exception, and hence its dominating influence on the retail market. Some dealers make a reduction for short hauls and easy delivery. The margin realized on sales by one company in some cases went up to as much as \$3.50 or more per ton, while it went down to 50 cents per ton, hauling and other expenses included, on contract coal purchased from a railroad coal company and sold to a prominent manufacturing concern. A very advantageous contract which this company had with a local wholesaler accounts in part for its large margin.

The Chicago retailers' gross margin, prior to April, 1916, is said to have been stationary for about 10 years, approximating \$1.25 per ton and reaching \$1.50 per ton in exceptional cases. Some retailers claim that the \$1.25 was the maximum allowed to them by the big anthracite companies whose local sales agents sell to small dealers and are eager to compete with the larger local dealers who conduct both a wholesale and a retail business. It is to be noted, however, that some large retailers were allowed a discount approximating 35 cents per ton by several railroad coal companies.

The peddlers purchase their supplies from wholesalers at the regular circular prices to dealers' wagons, which are \$1 below the consumer's price. This \$1 per ton is the peddler's gross margin. A

considerable portion of the peddler's sales is in bags of 100 pounds and per bushel of 80 pounds. During December 1916 peddlers paid \$9.50 per ton for chestnut and sold the same coal at \$10.50 per ton to their customers. A bag of chestnut sold at 60 cents, making \$12 per ton in the bushel and bag trade. The increased expenses in handling bag and bushel trade, the peddler states, account for the increased gross margin in this trade as compared with sales from a quarter ton up.

The following tables, compiled from the books of 11 representative Chicago retailers, show the cost prices, the typical sales prices, and the gross margins of these dealers on each size of coal, by classes of business. The first table is a summary showing minimum and maximum of cost prices, of typical sales prices, and of gross margins, and the weighted average cost price of anthracite for all 11 dealers in each month for each size. The second table gives the detailed information for each company.

The cost prices are actual weighted average costs of all coal of that size in stock during a given month.

The typical sales prices are averages of a number of prices selected as typical of sales made around the 5th, 15th, and 25th of each month. (See p. 176.)

The gross margins constitute the difference between the actual cost prices and the typical sales prices.

TABLE 59.—*Chicago—Summary for 11 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 60 for detail by companies.]

	Broken.			Egg.			Stove.		
	Mini- mum.	Maxi- mum.	Weight- ed aver- age.	Mini- mum.	Maxi- mum.	Weight- ed aver- age.	Mini- mum.	Maxi- mum.	Weight- ed aver- age.
SEPTEMBER.									
Cost price.....	\$6.26	\$6.85	\$6.38	\$6.52	\$7.32	\$6.62	\$6.45	\$7.36	\$6.62
Typical household and industrial sale price.....	8.15	8.56	.....	8.00	8.91	.....	8.00	8.91	.....
Gross margin.....	1.40	2.10	.....	1.10	2.14	.....	1.04	2.11	.....
Typical industrial contract sale price.....	7.85	7.85	.....	7.35	7.85	.....	.....	.....	.....
Gross margin.....	1.00	1.00	.....	.40	.99	.....	.....	.....	.....
Typical yard sale price.....	7.25	7.85	.....	7.40	7.85	.....	7.40	7.85	.....
Gross margin.....	.80	1.00	.....	.40	.80	.....	.40	.80	.....
OCTOBER.									
Cost price.....	6.29	6.86	6.46	6.72	7.20	6.82	6.58	7.37	6.69
Typical household and industrial sale price.....	7.45	9.75	.....	8.50	9.45	.....	8.50	9.45	.....
Gross margin.....	.72	2.90	.....	1.40	2.34	.....	1.23	2.42	.....
Typical industrial contract sale price.....	8.40	8.40	.....	8.40	8.75	.....	7.35	8.00	.....
Gross margin.....	1.54	1.54	.....	1.43	1.65	.....	.77	1.42	.....
Typical yard sale price.....	7.50	8.50	.....	7.50	8.50	.....	7.50	8.50	.....
Gross margin.....	1.00	1.64	.....	.46	1.53	.....	.46	1.39	.....
NOVEMBER.									
Cost price.....	6.31	6.86	6.47	6.86	7.57	6.99	6.75	7.73	6.85
Typical household and industrial sale price.....	8.50	10.50	.....	8.72	10.85	.....	8.72	10.85	.....
Gross margin.....	1.65	3.65	.....	1.43	3.74	.....	1.27	3.74	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	9.00	9.00	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	1.95	1.95	.....
Typical yard sale price.....	7.85	8.50	.....	8.50	9.50	.....	8.50	9.50	.....
Gross margin.....	1.00	1.64	.....	1.39	2.39	.....	1.31	2.75	.....
DECEMBER.									
Cost price.....	6.37	7.07	6.54	6.91	7.61	7.12	6.93	7.87	7.11
Typical household and industrial sale price.....	8.50	10.50	.....	8.82	10.85	.....	8.82	10.85	.....
Gross margin.....	1.46	3.63	.....	1.53	3.66	.....	1.53	3.66	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	8.35	9.50	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	1.30	2.45	.....
Typical yard sale price.....	8.10	9.00	.....	9.50	9.50	.....	9.50	9.50	.....
Gross margin.....	1.16	2.27	.....	2.21	2.41	.....	2.19	2.42	.....

TABLE 59.—Chicago—Summary for 11 representative retailers showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916—Continued.

	Chestnut.			Pea.			Buckwheat.		
	Mini- mum.	Maxi- mum.	Weight- ed aver- age.	Mini- mum.	Maxi- mum.	Weight- ed aver- age.	Mini- mum.	Maxi- mum.	Weight- ed aver- age.
SEPTEMBER.									
Cost price.....	\$6.78	\$7.55	\$6.88	\$5.32	\$6.17	\$5.57	\$4.00	\$4.78	\$4.37
Typical household and industrial sale price.....	8.37	9.47	.....	7.15	8.02	.....	5.85	6.54	.....
Gross margin.....	1.02	2.40	.....	1.23	2.28	.....	1.30	2.50	.....
Typical industrial contract sale price.....	8.34	8.34	.....	.....	.....	.....	.....	.....	.....
Gross margin.....	1.14	1.14	.....	.....	.....	.....	.....	.....	.....
Typical yard sale price.....	7.41	8.41	.....	6.40	6.80	.....	4.85	5.25	.....
Gross margin.....	.15	1.15	.....	.42	1.11	.....	.35	1.00	.....
OCTOBER.									
Cost price.....	6.93	7.65	7.03	5.79	6.36	5.90	4.00	4.81	4.57
Typical household and industrial sale price.....	8.96	9.85	.....	7.40	8.35	.....	5.75	6.83	.....
Gross margin.....	1.41	2.55	.....	1.40	2.35	.....	1.30	2.50	.....
Typical industrial contract sale price.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gross margin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typical yard sale price.....	8.00	8.63	.....	6.80	7.33	.....	4.85	5.75	.....
Gross margin.....	.94	1.44	.....	1.00	1.33	.....	.35	1.50	.....
NOVEMBER.									
Cost price.....	7.15	7.89	7.25	5.79	6.57	6.08	4.00	4.78	4.61
Typical household and industrial sale price.....	9.20	10.85	.....	7.63	9.85	.....	6.50	8.35	.....
Gross margin.....	1.55	3.54	.....	1.23	3.85	.....	1.88	4.04	.....
Typical industrial contract sale price.....	8.32	8.32	.....	.....	.....	.....	5.50	5.50	.....
Gross margin.....	.67	.67	.....	.....	.....	.....	.84	1.50	.....
Typical yard sale price.....	8.50	9.83	.....	7.50	8.50	.....	5.50	7.53	.....
Gross margin.....	1.17	2.19	.....	1.50	2.50	.....	1.50	3.22	.....
DECEMBER.									
Cost price.....	7.21	7.94	7.69	5.79	6.63	6.35	4.00	5.00	4.49
Typical household and industrial sale price.....	8.58	10.85	.....	7.75	9.85	.....	6.50	8.40	.....
Gross margin.....	1.19	3.51	.....	1.74	3.85	.....	1.50	4.16	.....
Typical industrial contract sale price.....	8.10	8.25	.....	.....	.....	.....	.....	.....	.....
Gross margin.....	.45	.51	.....	.....	.....	.....	.....	.....	.....
Typical yard sale price.....	9.50	9.60	.....	8.00	8.50	.....	5.50	7.00	.....
Gross margin.....	1.76	2.26	.....	2.00	2.50	.....	1.50	2.76	.....

TABLE 60.—*Chicago—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 11 representative dealers, September — December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]
 [Wherever in this table three prices are shown, they represent prices around the 5th, 15th, and 25th of the month.]

[See Table 59 for summary of this table.]

BROKEN.

Company.	September.						October.					
	Household and industrial.		Industrial contract.		Yard.		Household and industrial.		Industrial contract.		Yard.	
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.26	\$8.15 8.15 8.15	\$1.89 1.89 1.89			\$6.29	\$8.15 8.15 8.15	\$1.86 1.86 1.86				
No. 2.....	6.85	8.41 8.42 8.56	1.56 1.57 1.71	\$7.85	\$1.00	6.86	8.61 8.81 8.73	1.75 1.95 1.87	\$8.40	\$1.54		
No. 3.....	6.85	8.25 8.25 8.25	1.40 1.40 1.40		\$7.85 7.85 7.85	6.85	8.75 8.75 9.10	1.90 1.90 2.25			\$8.50 7.85 7.85	\$1.64 1.00 1.00
No. 5.....	6.85	8.25 8.25 8.50	1.40 1.40 1.84			6.85	9.10 9.10 8.25	2.25 2.25 1.52				
No. 6.....	6.66					6.73	7.45	.72				
No. 7.....	6.85					6.85	8.25 8.25 8.25	1.40 1.40 1.40				
No. 9.....	6.45	8.55	2.10		.80	6.45	8.85	2.40			7.50	1.65
No. 10.....	6.75	8.31 8.31	1.56 1.56			6.73	9.00 8.66 8.66	2.55 1.93 1.93				
No. 11.....	6.35	8.25	1.90		.90							
Minimum.....	6.26	8.15	1.40	7.85	1.00	6.29	7.45	.72	8.40	1.54	7.50	1.00
Maximum.....	6.85	8.56	2.10	7.85	1.00	6.86	9.75	2.90	8.40	1.54	8.50	1.64
Weighted average.....	6.38					6.46						

Company.	November.						December.					
	Cost price.	Household and industrial.		Industrial contract.		Yard.		Cost price.	Household and industrial.		Industrial contract.	
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.31	\$9.00	\$2.69					\$6.37	\$10.00	\$3.63		
		9.00	2.69						10.00	3.63		
		9.50	2.64						10.00	3.63		
No. 2.....	6.86	9.49	2.63			\$8.50	\$1.64	6.87	10.50	3.63		
		10.50	3.64						10.50	3.63		
		10.50	3.65						10.25	3.38		
No. 3.....	6.85	10.50	3.65			7.85	1.00	6.94				
		10.50	3.65			7.85	1.00					
		10.50	3.65			7.85	1.00					
No. 5.....	6.85	9.10	2.25					7.07	10.23	3.16		
		9.10	2.25						10.23	3.16		
		9.10	2.25						10.23	3.16		
No. 6.....	6.76	8.75	1.99					6.83	8.75	1.92		
		8.50	1.71						9.00	2.17		
									8.58	1.54		
No. 7.....	6.85	8.50	1.65					7.04	8.50	1.46		
		9.12	2.27						8.50	1.46		
		9.35	2.62			8.00	1.27	6.73	8.50	1.46		
No. 9.....	6.73								10.35	3.62		
									9.50	2.76		
No. 10.....	6.72	9.15	2.43					6.74	9.50	2.76		
		9.15	2.43						9.50	2.76		
		8.50	1.66						8.50	1.66		
No. 11.....	6.84	8.50	1.66					6.84				
Minimum.....	6.31	8.50	1.65			7.85	1.00	6.37	8.50	1.46		
Maximum.....	6.86	10.50	3.65			8.50	1.64	7.07	10.50	3.63		
Weighted average.....	6.47							6.54				

TABLE 60.—Chicago—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 11 representative dealers, September — December, 1916—Continued.

Company.	September.						October.					
	Household and industrial.			Industrial contract.			Household and industrial.			Industrial contract.		
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Yard.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Yard.
No. 1.....	\$6.52	\$8.50	\$1.98	\$7.35	\$0.83		\$6.72	\$8.87	\$2.15			
		8.50	1.98					8.88	2.16			
		8.66	2.14					8.86	2.14			
No. 2.....	6.86	8.41	1.55	7.85	.99		6.97	8.61	1.64	\$8.40	\$1.43	
		8.42	1.56					8.81	1.84			
No. 3.....	7.10	8.36	1.70					8.73	1.76			
		8.42	1.32			\$0.40		8.90	1.80			\$1.53
		8.48	1.38			.40		9.00	1.90	8.75	1.65	8.10
		8.50	1.40	7.50	.40			9.00	1.90			1.00
No. 4.....	7.32	8.45	1.13				7.20	8.60	1.40			
		8.50	1.18					9.00	1.80			
		8.53	1.21					9.00	1.80			
No. 5.....	7.10	8.50	1.40				7.10	9.35	2.25			
		8.50	1.40					9.35	2.25			
		8.50	1.40					9.35	2.25			
No. 6.....	6.90	8.00	1.10				6.98	8.69	1.71			
		8.25	1.35					8.75	1.77			
		8.50	1.60					8.75	1.77			
No. 7.....	7.10	8.40	1.30				7.10	8.90	1.80			
		8.44	1.34					8.60	1.50			
		8.44	1.34					8.98	1.88			
No. 8.....	7.00	8.51	1.51			.50	7.05	9.02	1.97			.95
		8.51	1.51			.50		9.02	1.97			8.00
		8.51	1.51			.50		9.02	1.97			8.00
No. 9.....	7.05	8.77	1.72			.43	7.11	9.00	1.89			.89
		8.83	1.78			.45		9.14	2.03			8.00
		8.91	1.86			.80		9.45	2.34			8.50
No. 10.....	6.94	8.36	1.62				6.97	9.06	2.09			1.39
		8.36	1.62					9.06	2.09			
		8.36	1.62					9.06	2.09			
No. 11.....	6.81	8.40	1.59			.59	7.04	8.50	1.46			.46
		8.50	1.69					9.00	1.96			8.00
Minimum.....	6.52	8.50	1.69			.69	6.72	9.00	1.96			.96
Maximum.....	7.32	8.91	2.14	7.35	.40		7.20	8.50	1.40			.46
Weighted average.....	6.62			7.85	.99	.80	6.82	9.45	2.34	8.40	1.65	1.53

Company.	November.						December.					
	Household and industrial.			Industrial contract.			Household and industrial.			Industrial contract.		
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Yard.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Yard.
No. 1.....	\$6.91	\$9.50	\$2.59					\$10.41	\$3.32			
		9.90	2.99					10.30	3.21			
		10.25	3.34					10.50	3.41			
No. 2.....	7.02	9.50	2.48					10.50	3.48			
		9.49	2.47					10.50	3.48			
		10.50	3.48					10.25	3.23			
No. 3.....	7.10	9.40	2.30					10.50	3.21			
		9.13	2.05					10.50	3.21			
		10.50	3.40					10.50	3.21			
								10.00	2.89			
No. 4.....	7.57	9.00	1.43					10.00	2.89			
		9.40	1.83					10.00	2.89			
		9.89	2.32					10.83	3.50			
No. 5.....	7.10	9.50	2.40					10.83	3.50			
		9.50	2.40					10.83	3.50			
		9.50	2.40					9.00	1.85			
No. 6.....	7.03	9.00	1.97					9.08	1.93			
		9.00	1.97					9.25	2.10			
		9.00	1.90					8.92	1.63			
No. 7 ¹	7.10	9.20	2.10					8.82	1.63			
		8.72	1.62					8.92	1.63			
		9.82	2.74					10.24	3.15			
No. 8.....	7.08	9.82	2.74					10.24	3.15			
		9.82	2.74					10.24	3.15			
		9.85	2.71					10.85	3.66			
No. 9 ¹	7.11	10.80	3.69					10.76	3.57			
		10.85	3.74					10.78	3.59			
		9.40	2.54					10.00	3.09			
No. 10.....	6.86	9.40	2.54					10.00	3.09			
		9.40	2.54					10.00	3.09			
		9.50	2.42					10.50	3.41			
No. 11 ¹	7.08	9.50	2.42					10.50	3.41			
		10.50	3.42					10.50	3.41			
Minimum.....	6.86	8.72	1.43					8.82	1.53			
Maximum.....	7.57	10.85	3.74					10.85	3.66			
Weighted average.....	6.99							7.12				

¹ Cost price for this company represents an average cost price for egg and stove combined.

² To dealers.

TABLE 60.—*Chicago—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 11 representative dealers, September — December, 1916—Continued.*

STOVE.

Company.	September.						October.					
	Cost price.	Household and industrial.		Industrial contract.		Yard.	Cost price.	Household and industrial.		Industrial contract.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$6.51	\$8.49 8.50 8.60 8.24	\$1.98 1.39 2.09				\$6.58	\$8.76 8.84 9.00 8.81	\$2.18 2.26 2.42	\$7.85 8.00	\$1.27 1.77 1.42	
No. 2.....	6.87	8.45 8.84 8.47	1.55 1.97 1.37	\$7.50 7.50 7.50	\$0.63 .40 .40		7.00	8.76 8.94 9.00 9.10 9.00	1.81 1.94 2.00 2.00 1.90			
No. 3.....	7.10	8.50 8.45	1.40 1.09				7.10	8.60 9.00 9.00	1.23 1.63 1.63			\$8.22 8.22 1.12
No. 4.....	7.36	8.50 8.53 8.50	1.14 1.17 1.40				7.37	8.60 9.00 9.35 9.35	1.23 1.63 2.25 2.25			
No. 5.....	7.10	8.50 8.50 8.00	1.40 1.40 1.04				7.10	8.75 8.90 8.90	1.64 1.70 1.80			
No. 6.....	6.96	8.25 8.50 8.40	1.29 1.54 1.39				7.05	8.75 8.90 8.90	1.70 1.80 1.50			
No. 7.....	7.10	8.34 8.44	1.24 1.34				7.10	8.98 9.08 9.06	1.88 1.96 1.96			
No. 8.....	7.05	8.60 8.60 8.77	1.55 1.55 1.55	7.50 7.50 7.58	.45 .45 .43		7.10	9.00 9.00 9.14	1.96 1.96 2.03			8.00 8.00 8.00
No. 9.....	7.05	8.83 8.91 8.56	1.78 1.86 2.11	7.50 7.85	.45 .80		7.11	9.45 9.95 8.95	2.31 2.16 2.16			8.50 8.50 8.00
No. 10.....	6.45	8.56 8.56 8.40	2.11 2.11 1.59				6.79	8.95 8.95 8.50	2.16 2.16 1.46			7.50 8.00 8.00
No. 11.....	6.81	8.50 8.50 8.50	1.59 1.69 1.69	7.40 7.50 7.50	.59 .69 .69		7.04	9.00 9.00 8.50	1.46 1.96 1.23			8.00 8.00 7.50
Minimum.....	6.45	8.00	1.04	7.40	.40		6.58	8.50	1.96	7.35	.77	8.00
Maximum.....	7.36	8.91	2.11	7.85	.80		7.37	9.45	2.42	8.00	1.42	8.50
Weighted average.....	6.62						6.69					1.39

Company.	November.					December.				
	Cost price.	Household and industrial.		Industrial contract.		Cost price.	Household and industrial.		Industrial contract.	
		Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.75	\$9.27	\$2.52			\$7.08	\$9.87	\$2.79		
		9.78	3.03				10.30	3.22		
		10.07	3.32				10.50	3.42		
No. 2.....	7.05	9.44	2.39	\$9.00	\$1.95	7.05	10.50	3.45	\$9.15	\$2.10
		10.03	2.98				10.50	3.45	8.35	1.30
		10.50	3.45				10.33	3.28	9.50	2.45
No. 3.....	7.10	9.50	2.40			7.31	10.00	2.69		
		9.80	2.70				10.10	2.79		
		10.00	2.90				10.50	3.19		
No. 4.....	7.73	9.00	1.27			7.87	10.00	2.13		
		9.40	1.67				10.00	2.13		
		9.89	2.16				10.00	2.13		
No. 5.....	7.10	9.35	2.25			7.32	10.50	3.18		
		9.35	2.25				10.50	3.18		
		9.35	2.25				10.50	3.18		
No. 6.....	7.07	8.90	1.83			7.15	9.00	1.85		
		9.00	1.93				9.08	1.93		
		9.00	1.93				9.25	2.10		
No. 7.....	7.10	9.20	2.10			7.29	8.92	1.63		
		8.72	1.62				8.92	1.63		
		9.89	2.70				10.41	3.20		
No. 8.....	7.19	9.89	2.70			7.21	10.41	3.20		
		9.89	2.70				10.41	3.20		
		9.85	2.74				10.85	3.66		
No. 9.....	7.11	10.80	3.69			7.19	10.76	3.57		
		10.85	3.74				10.78	3.59		
		9.57	2.72				10.00	3.07		
No. 10.....	6.85	9.57	2.72			6.93	10.00	3.07		
		9.57	2.72				10.00	3.07		
No. 11.....	7.08	9.50	2.42			7.09	10.50	3.41		
		9.50	2.42				10.50	3.41		
		10.50	3.42				10.50	3.41		
Minimum.....	6.75	8.72	1.27			6.93	8.82	1.53		
Maximum.....	7.73	10.85	3.74			7.87	10.85	3.66		
Weighted average.....	6.85					7.11				

¹ To dealers.

TABLE 60.—Chicago—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 11 representative dealers, September — December, 1916—Continued.

CHESTNUT.

Company.	September.						October.					
	Household and industrial.			Industrial contract.			Household and industrial.			Industrial contract.		
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Yard.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Yard.
No. 1.....	\$6.78	\$8.74	\$1.96			1 \$7.75	\$6.93	\$9.30	\$2.37			
		8.97	2.19					9.31	2.38			
		9.18	2.40					9.36	2.43			
No. 2.....	7.20	8.58	1.38	\$8.34	\$1.14	8.00	7.65	9.06	1.41			
		8.72	1.52					9.31	1.66			
		9.08	1.88			8 15		9.33	1.68			
No. 3.....	7.35	8.69	1.34			7.88	7.35	9.25	1.90			\$1.28
		8.90	1.55			7.88		9.50	2.15			8 63
		9.00	1.65			7.88		9.50	2.15			8 63
		8.70	1.15					9.50	1.89			
No. 4.....	7.55	8.78	1.23				7.61	9.50	1.89			
		9.00	1.45					9.50	1.89			
		9.00	1.65					9.35	2.00			
No. 5.....	7.35	9.00	1.65				7.35	9.35	2.00			
		9.00	1.65					9.35	2.00			
No. 6.....	7.20	8.50	1.30				7.27	9.00	1.73			
		8.50	1.30					9.00	1.73			
		8.88	1.68					9.00	1.73			
No. 7.....	7.35	8.37	1.02				7.35	8.96	1.61			
		8.80	1.45					9.32	1.97			
		9.38	2.03					9.36	2.01			
No. 8.....	7.26	8.50	1.64			7.75	7.29	9.46	2.17			1.21
		8.90	1.64			7.75		9.46	2.17			8.50
		8.90	1.64			7.75		9.46	2.17			1.21
No. 9.....	7.26	8.83	1.57			7.41	7.30	9.43	2.13			8.50
		9.35	2.09			8.00		9.85	2.55			1.20
		9.47	2.21			8.41		9.76	2.46			8.50
No. 10.....	7.18	8.86	1.68				7.18	9.25	2.07			1.20
		8.86	1.68					9.25	2.07			
		8.86	1.68					9.25	2.07			
No. 11.....	6.91	8.75	1.84			7.75	7.06	9.00	1.94			.94
		9.00	2.09			8.00		9.00	1.94			.94
		8.65	1.74			7.65		9.50	2.44			8.50
Minimum.....	6.78	8.37	1.02	8.34	1.14	7.41	6.93	8.96	1.41			8.00
Maximum.....	7.55	9.47	2.40	8.31	1.14	8.41	7.65	9.85	2.55			8.63
Weighted average.....	6.88						7.03					1.44

Company.	November.						December.					
	Household and industrial.		Industrial contract.		Yard.		Cost price.		Household and industrial.		Industrial contract.	
	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$9.62 10.33 10.50 9.20	\$2.47 3.18 3.35 1.55					\$7.74		\$10.38 10.50 10.50 10.27	\$2.64 2.76 2.76 2.62	\$8.25	\$0.51
No. 2.....	10.04 10.50 9.50 10.00 10.00	2.39 2.85 2.15 2.65 2.65	\$8.32	\$0.67	\$9.83	\$2.18	7.65		10.38 10.41 10.20 10.30 10.50	2.73 2.70 2.80 3.00 2.56	8.10	.45
No. 3.....	9.50 10.36 10.50 10.50 10.50	1.61 2.47 3.15 3.15 3.15			9.00	1.65	7.50		10.50 10.50 10.50 10.50 10.50	3.00 2.56 2.56 2.93 2.93	9.50	2.00
No. 4.....	9.50 10.36 10.50 10.50 10.50	1.61 2.47 3.15 3.15 3.15			9.00	1.65	7.94		10.50 10.50 10.50 10.50 10.50	3.00 2.56 2.56 2.93 2.93	9.50	2.00
No. 5.....	9.25 9.25 9.70 9.66	1.95 1.95 2.35 2.31					7.57		10.50 10.50 10.50 10.50 10.50	2.93 2.93 2.93 2.93 2.93	9.50	2.00
No. 6.....	9.25 9.25 9.70 9.66	1.95 1.95 2.35 2.31					7.39		10.50 10.50 10.50 10.50 10.50	2.93 2.93 2.93 2.93 2.93	9.50	2.00
No. 7.....	9.25 9.25 9.70 9.66	1.95 1.95 2.35 2.31					7.54		10.50 10.50 10.50 10.50 10.50	2.93 2.93 2.93 2.93 2.93	9.50	2.00
No. 8.....	10.19 10.19 9.73 10.85	2.86 2.86 2.42 3.54	8.50	1.17	8.50	1.17	7.34		10.58 10.58 10.76 10.85	3.24 3.24 3.42 3.51	9.50	2.16
No. 9.....	10.85 9.84 9.84 9.84	3.54 2.66 2.66 2.66	9.50	2.19	9.50	2.19	7.34		10.58 10.58 10.76 10.85	3.24 3.24 3.42 3.51	9.50	2.16
No. 10.....	9.84 9.84 9.50 9.50	2.66 2.66 2.35 2.35					7.21		10.00 10.00 10.50 10.50	2.79 2.79 3.25 3.25	9.50	2.16
No. 11.....	10.50 9.20 10.85	3.35 1.55 3.54					7.25		10.50 10.50 10.50	3.25 3.25 3.25	9.50	2.16
Minimum.....	7.15	1.55	8.32	.67	8.50	1.17	7.21		8.58	1.19	8.10	.45
Maximum.....	7.89	3.54	8.32	.67	9.83	2.19	7.94		10.85	3.51	8.25	.51
Weighted average.....	7.25						7.69					

¹ To dealers.

TABLE 60.—Chicago—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business for 11 representative dealers, September — December, 1916—Continued.

P.E.A.

Company.	September.						October.					
	Cost price.		Household and industrial.		Industrial contract.		Cost price.		Household and industrial.		Industrial contract.	
			Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$5.32		\$7.40	\$2.08			\$5.84		\$7.63	\$1.79		
			7.36	2.04					7.64	1.80		
			7.00	2.28					7.93	2.09		
No. 2.....	6.00		7.31	1.31			6.36		8.00	1.64		
			7.35	1.35					8.00	1.64		
			7.52	1.52					8.25	1.89		
No. 3.....	6.00		7.36	1.36			6.00		8.00	2.00		
			7.36	1.36					7.88	1.88		
			7.88	1.88					8.00	2.00		
No. 4.....	6.17		7.40	1.23			6.21		8.00	1.79		
			7.40	1.23					8.00	1.79		
			7.50	1.50			6.00		8.35	2.35		
No. 5.....	6.00		7.50	1.50					8.35	2.35		
			7.50	1.50					8.35	2.35		
No. 6.....	5.75		7.15	1.40			5.90		7.75	1.85		
			7.15	1.40					7.63	1.73		
			7.40	1.40					7.50	1.60		
No. 7.....	6.00		7.40	1.40			6.00		7.40	1.40		
			7.40	1.40					7.87	1.87		
No. 8.....	5.91		7.61	1.70			6.00		7.97	1.97		
			7.61	1.70					7.97	1.97		
			7.57	1.59					8.28	2.28		
No. 9.....	5.98		7.66	1.68			6.00		8.35	2.35		
			8.02	2.04					8.35	2.35		
No. 10.....	6.12		7.86	1.74			5.98		8.02	2.04		
			7.86	1.74					8.02	2.04		
No. 11.....	5.69		7.40	1.71			5.79		7.80	2.01		
			7.40	1.71					8.00	2.21		
Minimum.....	5.32		7.80	2.11			5.79		7.40	1.40		
Maximum.....	6.17		8.02	2.28			5.90		8.35	2.35		
Weighted average.....	5.57						5.90					

Company.	November.						December.					
	Household and industrial.		Industrial contract.		Yard.		Household and industrial.		Industrial contract.		Yard.	
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.		Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$6.10	\$8.55	\$2.45					\$9.50	\$2.98			
		9.50	3.40					9.50	2.98			
		9.26	3.16					9.50	2.98			
No. 2.....	6.36	8.50	2.14				6.35	8.92	2.57			
		9.14	2.78					9.25	2.90			
		9.00	2.64					9.00	2.65			
No. 3.....	6.00	7.94	1.94				6.00	9.00	3.00			
		8.50	2.50	\$7.50	\$1.50			9.33	3.33			\$2.00
		8.75	2.75	7.50	1.50			9.50	3.50			2.00
		7.80	1.23					8.50	1.87			
No. 4.....	6.57	8.00	1.43				6.63	8.50	1.87			
		8.25	1.68					8.50	1.87			
		8.35	2.35				6.00	9.50	3.50			
No. 5.....	6.00	8.35	2.35					9.50	3.50			
		8.35	2.35					7.75	1.74			
No. 6.....	5.95	7.63	1.68				6.01	8.35	2.34			
		7.75	1.80					8.35	2.34			
		7.75	1.80					8.00	2.00			
No. 7.....	6.00	8.00	2.00				6.00	8.50	2.50			
No. 8.....	6.00	9.45	3.45					9.52	3.52			2.50
		9.45	3.45	7.50	1.50			9.52	3.52			2.50
		9.45	3.45	7.50	1.50			9.52	3.52			2.50
No. 9.....	6.00	8.88	2.88					9.85	3.85			2.50
		9.40	3.40	8.17	2.17			9.85	3.85			2.50
		9.85	3.85	8.50	2.50			9.78	3.78			2.50
No. 10.....	5.82	8.30	2.48					9.00	3.20			
		8.30	2.48				5.80	9.00	3.20			
		8.30	2.48					9.00	3.20			
No. 11.....	5.79	8.50	2.71					9.50	3.71			
		8.50	2.71				5.79	9.50	3.71			
Minimum.....	5.79	9.50	3.71					9.50	3.71			2.00
Maximum.....	6.57	7.63	1.23					7.75	1.74			2.50
Weighted average.....	6.08	9.85	3.85				6.35	9.85	3.85			

TABLE 60.—Chicago—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for 11 representative dealers, September — December, 1916—Continued.

BUCKWHEAT.

Company.	September.						October.					
	Cost price.	Household and industrial.		Industrial contract.		Yard.	Cost price.	Household and industrial.		Industrial contract.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1	\$4.28	\$5.96 5.88	\$1.68 1.60				\$4.56	\$6.21 5.88	\$1.65 1.32			
No. 2	4.00	6.00 6.50	2.00 2.50				4.81	6.50 6.50	1.69 2.50			
No. 3	4.00	6.00 6.00	2.00 2.00			\$5.00 5.00	4.00	6.50 6.50	2.50 2.50			\$1.50 1.50
No. 4	4.58	6.00 5.88	1.42 1.30				4.45	5.88 5.75	1.43 1.30			
No. 7							4.00					
No. 9	4.30	5.87 6.54 6.44	1.57 2.24 2.14			5.00 5.25	4.43	6.75 6.35 6.59	2.32 1.92 2.16			5.50 5.50 5.75
No. 10	4.78	6.49 6.49	1.71 1.71				4.78	6.83 6.83	2.05 2.05			
No. 11	4.50	5.85 5.85	1.35 1.35			4.85 4.85	4.50	6.83 5.85	2.05 1.35			4.85 .35
Minimum	4.00	5.85	1.30			4.85	4.00	6.50	2.00			5.50
Maximum	4.78	6.54	2.50			5.25	4.81	5.75	1.30			4.85
Weighted average	4.37						4.57	6.83	2.50			5.75

Company.	November.						December.					
	Cost price.	Household and industrial.		Industrial contract.		Yard.	Cost price.	Household and industrial.		Industrial contract.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$4.66	\$6.54 7.33 7.06 7.00 7.50	\$1.88 2.67 2.40 2.34 2.84				{ \$4.59	{ \$3.00 7.28 8.00	{ \$3.41 2.69 3.41			
No. 2.....	4.66											
No. 3.....	4.00	6.50 6.50 6.50 6.50	2.50 2.50 2.50 2.00		\$0.84	\$5.50	{ 4.00	{ 6.50 6.50 6.50 6.50	{ 2.50 2.50 2.50 1.50			{ \$1.50 1.50 1.50 1.50
No. 4.....	4.50						{ 5.00	{ 6.50	{ 1.50			{ \$1.50 1.50 1.50
No. 7.....	4.00	7.00 7.50	3.00 3.50		1.50	5.50	{ 4.00	{ 7.50	{ 3.50			{ \$3.50 5.50 5.50
No. 9.....	4.31	6.53 8.35 8.35	2.22 4.04 4.04				{ 4.24	{ 8.40 8.35 8.35	{ 4.16 4.11 4.11			{ 2.76 2.76 2.76
No. 10.....	4.78	7.31 7.31 7.00	2.53 2.53 2.50				{ 4.78	{ 8.00 8.00 8.00	{ 3.22 3.22 3.50			{ 2.22 2.22 2.22
No. 11.....	4.50	7.00 7.00	2.50 2.50				{ 4.50	{ 8.00	{ 3.50			{ 3.50 1.50 1.50
Minimum.....	4.00	6.50	1.83		.84	5.50	{ 4.00	{ 8.40	{ 4.16			{ 5.50 7.00
Maximum.....	4.78	8.35	4.04		1.50	5.50	{ 5.00	{ 8.40	{ 4.16			{ 7.00 2.76
Weighted average.....	4.61						{ 4.49	{ 4.49	{ 4.49			{ 4.49

Retailers' margins.—An analysis of the accompanying table from the viewpoint of gradation of margins by trade groups indicates that the industrial contract trade margins are the smallest and show the least fluctuations.

The wholesale or "yard" trade shows higher margins and larger variations between the minimum and maximum margins. This is due to the fact that some sales to small dealers or peddlers classed under the head of yard sales include deliveries to the consumers' bins, the peddler or small dealer in these cases merely taking the order and assuming the credit risk. The yard trade margins therefore include delivery charges on sales of this character.

The general household and industrial trade margin shows the largest fluctuations and reaches the highest levels.

All retail margins increased from September to October and still more in November, when the highest levels were reached. A slight drop followed in December on some sizes. The averages for the entire period are higher than the initial margins in September, but slightly lower than the December margins.

This condition prevailed also in Milwaukee, and may be attributed in some measure to the stoppage of the all-lake coal supply in the beginning of December.

The largest margins were realized on the steam sizes, which reached as high as \$4.16 on buckwheat and \$3.85 on pea in December. It is also significant that the margins on steam sizes did not show any drop in December, but continued to rise throughout the entire period. Of the prepared sizes stove and broken showed the highest margins with egg and nut following closely behind. The large increase in the margins on steam sizes appears to be due to the still larger price increase in bituminous coal, which is used for much the same purpose in Chicago.

Minimum and maximum margins.—The range between the minimum and the maximum margins in the household trade was largest in the small sizes. In December the difference between the minimum and maximum margin in buckwheat was \$2.66. The next largest range appears in the margins in nut, being \$1.19 in September and \$2.32 in December. The margins in stove, egg, and broken follow in the order named.

In the industrial contract trade the range between the minimum and maximum margins is smallest. The minimum and maximum margins were alike for broken and nut in September and November and almost alike for nut in October and December.

In the "yard" trade the range increased continuously from September to December, the maximum rising more rapidly than the minimum. On the whole, the maximum margins were more than doubled at the close of the four-month period.

Sales prices.—The sales prices kept rising throughout the period on all sizes with the sole exception of nut, which dropped slightly in November and December in the industrial contract and in yard trade, but no drop took place in the maximum in the general household trade.

The increasing demand for coal with the advancing season seems to have enabled the dealers to increase their sales prices, because their cost prices do not indicate the same rate of upward movement as do their margins.

Cost prices.—The differences between the minimum and maximum cost prices, as shown in the table, are much smaller than in the sales prices, which apparently indicates that the weakest consumer did not get the same treatment at the hands of the retail dealers as the latter got at the hands of the wholesalers. The increase in the cost price during these four months was in no case more than 50 cents, while the increases in the sales prices ranged from \$1 to \$2. The maximum cost prices had increased in December over the September prices as follows: Broken, 25 cents; nut, 40 cents; egg, 29 cents; stove, 51 cents; pea, 49 cents; and buckwheat, 22 cents. The corresponding increases in the maximum sales prices in the household trade were \$1.94, \$1.38, \$2.19, \$1.94, \$1.83, and \$1.86.

While the average maximum cost prices for the whole period had increased over the September prices for broken, 11 cents; nut, 18 cents; egg, 10 cents; pea, 21 cents; and buckwheat, 9 cents; the average maximum sales prices in the industrial trade had gone up for the same sizes: \$1.13, 59 cents, \$1.27, 92 cents, 80 cents, and 70 cents.

To summarize, it appears that the Chicago retailers advanced their sales prices at a rate altogether out of proportion with their cost prices. Furthermore, in view of the fact that the costs of doing business were, on the whole, uniform among all the Chicago dealers, labor wages, which are based on agreements with teamsters' and other unions, being uniform, and dealers delivering within zones only, the wide range in margins appears to indicate that some dealers advanced their sales prices arbitrarily and seized the opportunity to increase their profits.

MILWAUKEE.

Transportation.—Anthracite coal comes to Milwaukee chiefly by lake via Buffalo, Erie, and Oswego. A small quantity is forwarded by the Pere Marquette Railroad and car ferry across the lake from Ludington, Mich., or by the Grand Trunk Railroad and car ferry across the lake from Grand Haven, Mich. In normal years hardly any anthracite comes to Milwaukee by an all-rail route. The three railroads that serve Milwaukee directly are the Chicago, Milwaukee & St. Paul, the Chicago & North Western, and the Minneapolis, St. Paul & Sault Ste. Marie.

The lake contract rates from Buffalo to Milwaukee ranged from 30 to 50 cents per ton during the season of navigation. The published rates of the Lehigh Valley Transportation Co. amounted to 30 cents per net ton up to April 22, 1916. From that date until October 18, 1916, the rate was 35 cents per net ton. From October 18 until the close of navigation on December 5, 1916, the rate was 50 cents per net ton. A considerable tonnage was shipped by "wild" cargoes during 1916, owing to the difficulty of getting contract cargoes. The rate on "wild" cargoes from Buffalo to Milwaukee averaged 65 cents per ton for the season. A leading local wholesale concern was obliged to pay 25 cents per net ton extra freight on a cargo of approximately 7,000 tons of chestnut from Buffalo in November. The freight rate from the mines to Buffalo is \$2 per gross ton on prepared sizes and \$1.75 per gross ton on smaller sizes.

The rate to Milwaukee proper from mines, via car ferry, is \$4 per gross ton. For points beyond Milwaukee the rate is \$3.75. The difference of 25 cents per ton is due to the fact that the Pere Marquette and the Grand Trunk have limited terminal facilities in Milwaukee, and are required to absorb switching and other charges on coal for local delivery. Where traffic moves through Milwaukee to other points, coal is accepted at the ferry docks by railroads which receive the outbound haul.

The rate for all-rail coal from mines to Milwaukee by way of Chicago amounts to \$4.17 per gross ton.

In 1916 the total anthracite coal shipments from Milwaukee amounted to 373,661 tons. Of this quantity 169,022 tons were shipped by the Chicago, Milwaukee & St. Paul Railway, 169,641 tons by the Chicago & North Western Railway, and 34,998 tons by the Soo Line.

Sources of supply, and local distribution.—The bulk of the anthracite coal consumed in Milwaukee comes to the local docks by lake. The anthracite storage capacity of Milwaukee coal docks amounts to 600,000 tons.

The following are the receipts of anthracite by vessel at Milwaukee during the seasons 1915 and 1916 as reported by captains at the customhouse, arranged according to size of dock companies:

	1915	1916
	<i>Tons.</i>	<i>Tons.</i>
Milwaukee Western Fuel Co.....	576, 413	490, 592
Lehigh Valley Coal Sales Co.....	146, 073	120, 000
Kanawha Fuel Co.....	106, 019	89, 164
Pennsylvania Coal & Supply Co.....	97, 017	.....
Gross Coal Co.....	94, 246	82, 949
Philadelphia & Reading Coal & Iron Co.....	37, 075	37, 453
Callaway Fuel Co.....	18, 322	27, 419
North Side Coal Co.....	10, 580	5, 640
Total.....	1, 085, 745	853, 217

The receipts of anthracite coal by car ferry amounted to 97,256 tons for the year 1916. All-rail shipments of anthracite received at Milwaukee during 1916 amounted to 4,847 tons. During the first two months of 1917 all-rail shipments increased largely.

More than half of the anthracite handled in Milwaukee is Delaware, Lackawanna & Western and Lehigh Valley coal. The Milwaukee-Western Fuel Co. is the sales agency for the Delaware, Lackawanna & Western Coal Co., and sells about as much anthracite coal at wholesale and retail as all the other local dealers together. It operates nine wharves, all with rail connections except one. One yard is operated exclusively for retail business. The Lehigh Valley Coal Sales Co. is the second largest wholesaler, and operates one dock and one rail yard. Approximately 90 per cent of the local wholesale sales of the Milwaukee coal dock companies are made to dealers, the remainder to industrial concerns.

There are few anthracite jobbers in Milwaukee, because the retailers generally get their coal directly from the dock companies. The bulk of the jobbing business goes outside of the city.

In addition to the dock companies, some of whom also do a retail business, there are about 100 retail coal dealers in Milwaukee, the largest of whom have an anthracite tonnage of from 5,000 to 9,000 tons per year, and rail yards of their own. There are about 100 local hucksters of coal who buy on an average one ton at a time at the docks at the same price as that paid by retail dealers and sell per bag of 79 pounds. The hucksters' price for chestnut averaged 40 cents per bag.

Milwaukee is a distributing center for points in Wisconsin and neighboring States. In 1915 the three railroads that serve Milwaukee directly transported 499,319 tons of anthracite from Milwaukee to interior points.

Local shortage and its causes.—Up to the close of navigation in December, 1916, the total receipts of anthracite coal by lake at the Milwaukee docks amounted to 853,217 tons. This was a decrease of 232,528 tons as compared with the receipts in 1915, which were 1,085,745 tons. In former years the normal lake receipts of anthracite had been slightly in excess of 1,000,000 tons. While the stocks on hand at the docks in December, 1916, were sufficient to meet the local demand, the falling off in receipts materially affected the shipments from Milwaukee to points in the interior served by local dealers. At times, particularly in January, 1917, Milwaukee wholesalers had to turn down orders from points outside of the city on account of lack of supply. To make up for shortage in lake coal, anthracite was shipped to Milwaukee by rail via Chicago. Toward the close of January, 1917, about 100,000 tons of all-rail coal had come to Milwaukee.

It is noteworthy that while in some other large cities an artificial demand, produced to a large extent by sensational exploitation by local newspapers of an alleged impending famine, resulted in a panic scare and temporary periods of coal shortage, this was not the case in Milwaukee. It appears that by means of a systematic advertising campaign local dealers kept the public informed of the conditions actually existing in the local coal market and thus succeeded in preventing panic fear on the part of consumers. Economical distribution of sales by dealers also helped to conserve the available supply.

Wholesale prices.—In Milwaukee the wholesale anthracite business is in the hands of the local dock companies, of whom the largest are the Milwaukee-Western Fuel Co. (selling Delaware, Lackawanna & Western coal), the Lehigh Valley Coal Sales Co., and the Philadelphia & Reading Coal & Iron Co.

From September, 1916, till January, 1917, wholesale circular prices remained stationary. On January 1, 1917, the Lehigh Valley Coal Sales Co. advanced its circular wholesale prices 25 cents per ton on prepared sizes, and on January 16, 1917, the Milwaukee-Western Fuel Co. announced a similar advance.

The following tabulation indicates the wholesale circular prices for anthracite, f. o. b. cars Milwaukee in net tons from September, 1916, till January, 1917, inclusive:

Wholesale circular prices for anthracite, f. o. b. cars, Milwaukee, in net tons, September, 1916-January, 1917.

Size.	September-December, 1916.	January, 1917.
Egg.....	\$7.10	\$7.35
Stove.....	7.10	7.35
Nut.....	7.35	7.60
Pea.....	6.00	6.00
Buckwheat.....	4.25	4.75

Prices to dealers at docks were 25 cents per ton above the f. o. b. car prices.

The following statement shows the circular yard sale price of the Milwaukee-Western Fuel Co. to dealers:

Wholesale circular prices, per net ton, of anthracite to dealers at yards, at Milwaukee, Wis., of the Milwaukee Western Fuel Co., April 1, 1916—January 16, 1917.

[The prices for grate coal were taken from price list of Lehigh Valley Coal Sales Co., as the two price lists are identical.]

Date of circular.	Grate.	Egg.	Stove.	Nut.	Pea.	Buckwheat.
Apr. 1, 1916.....	\$6.85	\$7.10	\$7.10	\$7.35	\$5.80	\$4.25
May 1, 1916.....	6.70	6.95	6.95	7.20	5.85	4.50
June 1, 1916.....	6.80	7.05	7.05	7.30	5.95	4.50
July 1, 1916.....	6.90	7.15	7.15	7.40	6.05	4.50
Aug. 1, 1916.....	7.00	7.25	7.25	7.50	6.15	4.50
Sept. 1, 1916.....	7.10	7.35	7.35	7.60	6.25	4.50
Oct. 1, 1916.....	7.10	7.35	7.35	7.60	6.25	4.50
Nov. 1, 1916.....	7.10	7.35	7.35	7.60	6.25	4.50
Dec. 1, 1916.....	7.10	7.35	7.35	7.60	6.25	4.50
Jan. 16, 1917.....	7.35	7.60	7.60	7.85	6.25	4.50

From the above table it will be noted that the wholesale circular prices of the Milwaukee-Western Fuel Co. to dealers at yards show an increase of 50 cents per net ton on prepared sizes, 45 cents on pea, and 25 cents per net ton on buckwheat on January 16, 1917, as compared with April 1, 1916. The customary spring discount was not allowed in April, 1916. On May 1, 1916, prices decreased 15 cents on prepared sizes and advanced 5 cents per ton on pea and 25 cents on buckwheat. From June 1 till September 1 prices advanced 10 cents per ton each month on all sizes except buckwheat, remaining stationary from September till January, 1917. On January 16, 1917, an advance of 25 cents became effective on all sizes except pea and buckwheat.

Retail prices.—The following table indicates the retail circular prices of a leading Milwaukee retailer for anthracite from September 1, 1916, to January 22, 1917:

Size.	September.	October.	Dec. 12.	Jan. 16, 1917.	Jan. 22, 1917.
Egg.....	\$8.50	\$8.60	\$8.60	\$9.10	\$9.10
Stove.....	8.50	8.60	8.60	9.10	9.10
Nut.....	8.75	8.85	8.85	9.35	9.35
Pea.....	7.40	7.50	7.50	7.75	7.75
Buckwheat.....	5.75	5.75	6.25	6.00	6.50

The gross margin of the retailers prior to October 1, 1916, ranged from \$1 to \$1.15 per ton. From October 1, 1916, to January 16, 1917, the margin allowed them by the dock companies (i. e., the margin between the price at which the dock companies sold to them and that at which the dock companies themselves sold as retail dealers) amounted to \$1.25, and after that date it became \$1.50.

Retailers' margins.—The outstanding feature of the Milwaukee retail anthracite market in the last four months of 1916 was the comparative smallness and evenness of the margins, as shown by the accompanying tables, which are in the form of summary and detail, for five representative dealers.

The tables are on the same plan as tables 59 and 60 for Chicago, and the meanings of cost price and gross margin are as explained on pages 176 and 177.

TABLE 61.—*Milwaukee, Wis.—Summary for 5 representative retailers, showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September—December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[See Table 62 for detail by companies.]

	Egg.			Stove.			Chestnut.		
	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.	Minimum.	Maximum.	Weighted average.
SEPTEMBER.									
Cost price.....	\$6.72	\$7.75	\$6.93	\$6.72	\$7.75	\$6.88	\$6.97	\$8.00	\$7.08
Typical household sale price.....	8.30	8.62	.....	8.30	8.67	.....	8.50	8.89	.....
Gross margin.....	.75	1.78	.....	.75	1.78	.....	.75	1.78	.....
Typical yard sale price.....	7.11	7.35	.....	7.35	7.72	.....	7.60	7.80	.....
Gross margin.....	.01	.63	.....	.56	.63	.....	.42	.63	.....
OCTOBER.									
Cost price.....	6.72	7.90	6.92	6.72	7.90	6.90	6.97	8.15	7.07
Typical household sale price.....	8.35	8.87	.....	8.36	8.81	.....	8.58	9.10	.....
Gross margin.....	.70	1.88	.....	.70	1.88	.....	.70	1.88	.....
Typical yard sale price.....	7.20	7.35	.....	7.35	7.74	.....	7.60	7.86	.....
Gross margin.....	.08	.63	.....	.62	.63	.....	.47	.63	.....
NOVEMBER.									
Cost price.....	6.72	7.90	6.92	6.72	7.90	6.87	6.97	8.15	7.04
Typical household sale price.....	8.38	8.93	.....	8.38	8.92	.....	8.73	9.22	.....
Gross margin.....	.70	1.88	.....	.70	1.88	.....	.70	1.88	.....
Typical yard sale price.....	7.35	7.73	.....	7.35	8.22	.....	7.60	8.20	.....
Gross margin.....	.63	.68	.....	.63	1.10	.....	.63	.85	.....
DECEMBER.									
Cost price.....	6.72	8.15	6.93	6.72	8.15	8.85	6.97	8.40	7.05
Typical household sale price.....	8.52	8.95	.....	8.52	8.95	.....	8.80	9.22	.....
Gross margin.....	.45	1.88	.....	.45	1.88	.....	.45	1.88	.....
Typical yard sale price.....	7.35	7.61	.....	7.35	7.79	.....	7.60	8.18	.....
Gross margin.....	.53	.63	.....	.63	.69	.....	.63	.83	.....

TABLE 61.—*Milwaukee, Wis.—Summary for 5 representative retailers, showing the minimum and maximum of cost prices, of typical sale prices, and of gross margins, for principal classes of business, and the weighted average cost prices of white ash anthracite, per net ton, by sizes, September — December, 1916—Continued.*

	Pea.			Buckwheat.			Dust.		
	Mini- mum.	Maxi- mum.	Weight- ed aver- age.	Mini- mum.	Maxi- mum.	Weight- ed aver- age.	Mini- mum.	Maxi- mum.	Weight- ed aver- age.
SEPTEMBER.									
Cost price.....	\$5.67	\$6.65	\$5.80	\$3.96	\$4.90	\$4.06	\$0.96	\$1.70	\$1.23
Typical household sale price.....	7.02	7.55	.....	5.75	5.95	.....	.....	.....	.....
Gross margin.....	.75	1.73	.....	.85	1.79	.....	.....	.....	.....
Typical industrial sale price.....	.....	.....	.....	5.25	5.75	.....	2.00	2.00	.....
Gross margin.....	.....	.....	.....	1.29	1.50	.....	1.04	1.04	.....
Typical yard sale price.....	6.25	6.63	.....	4.50	5.19	.....	1.50	1.74	.....
Gross margin.....	.57	.58	.....	.54	.94	.....	.04	.54	.....
OCTOBER.									
Cost price.....	5.67	6.80	5.80	3.96	5.05	4.03	.96	2.04	1.23
Typical household sale price.....	7.35	7.71	.....	5.75	6.02	.....	.....	.....	.....
Gross margin.....	.70	1.83	.....	.70	1.92	.....	.....	.....	.....
Typical industrial sale price.....	.....	.....	.....	5.25	5.75	.....	2.00	2.00	.....
Gross margin.....	.....	.....	.....	1.29	1.50	.....	1.04	1.04	.....
Typical yard sale price.....	6.25	6.84	.....	4.50	5.27	.....	1.50	1.73	.....
Gross margin.....	.58	.71	.....	.54	1.17	.....	¹ .31	.54	.....
NOVEMBER.									
Cost price.....	5.67	6.80	5.80	3.96	5.05	4.03	.96	2.76	1.40
Typical household sale price.....	7.47	7.99	.....	5.75	5.99	.....	.....	.....	.....
Gross margin.....	.70	1.99	.....	.70	1.79	.....	.....	.....	.....
Typical industrial sale price.....	.....	.....	.....	5.25	5.75	.....	2.00	2.00	.....
Gross margin.....	.....	.....	.....	1.29	1.50	.....	1.04	1.04	.....
Typical yard sale price.....	6.25	7.34	.....	4.50	5.46	.....	1.50	1.79	.....
Gross margin.....	.58	1.34	.....	.54	1.21	.....	¹ .97	.54	.....
DECEMBER.									
Cost price.....	5.67	7.05	5.81	3.96	5.59	4.03	.96	1.38	1.00
Typical household sale price.....	7.50	7.82	.....	5.75	6.42	.....	.....	.....	.....
Gross margin.....	.45	1.83	.....	.16	1.92	.....	.....	.....	.....
Typical industrial sale price.....	.....	.....	.....	5.25	6.25	.....	2.00	2.00	.....
Gross margin.....	.....	.....	.....	1.29	1.90	.....	1.04	1.04	.....
Typical yard sale price.....	6.25	7.82	.....	4.50	4.50	.....	1.50	2.37	.....
Gross margin.....	.58	1.40	.....	.54	.54	.....	.54	.99	.....

¹ Loss.

Company.	November.						December.						
	Cost price.	Household.		Industrial.		Yard.	Cost price.	Household.		Industrial.		Yard.	
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.		
No. 1.....	\$7.35	\$8.60	\$1.25				\$7.60	\$8.60	\$1.00				
		8.60	1.25					8.60	1.00				
		8.93	1.88			\$7.73	7.08	8.95	1.87			\$7.61	\$0.53
No. 2.....	7.05	8.93	1.88			7.73		8.95	1.87			7.61	.53
		8.93	1.88					8.95	1.87				
		8.60	1.50				7.10	8.52	1.42				
No. 3.....	7.10	8.38	1.28					8.58	1.48				
		8.60	1.50					8.60	1.50				
		8.60	.70				8.15	8.60	.45				
No. 4.....	7.90	8.60	.70					8.60	.45				
		8.60	.70					8.60	.45				
		8.60	1.88			7.35		8.60	1.88			7.35	.63
No. 5.....	6.72	8.60	1.88			7.35	6.72	8.60	1.88			7.35	.63
		8.60	1.88			7.35		8.60	1.88			7.35	.83
Minimum.....	6.72	8.38	.70				6.72	8.52	.45				
Maximum.....	7.90	8.93	1.88			7.73	8.15	8.95	1.88			7.61	.63
Weighted average.....	6.92						6.93						

TABLE 62.—*Milwaukee, Wis.—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite by sizes and by principal classes of business, for 5 representative dealers, September ———, December, 1916—Continued.*

STOVE.

Company.	September.								October.			
	Household.		Industrial.		Yard.				Household.		Industrial.	
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.35	\$8.50	\$1.15					\$7.35	\$8.60	\$1.25		
		8.50	1.15						8.60	1.25		
		8.67	1.51		\$0.56				8.81	1.69		
No. 2.....	7.16	8.67	1.51		.56	\$7.72		7.12	8.81	1.69	\$7.74	\$0.62
		8.67	1.51		.56	7.72			8.81	1.69	7.74	.62
		8.30	1.20						8.36	1.26		
No. 3.....	7.10	8.35	1.25					7.10	8.48	1.38		
		8.42	1.32						8.41	1.31		
		8.50	.75						8.60	.70		
No. 4.....	7.75	8.50	.75					7.90	8.60	.70		
		8.50	.75						8.60	.70		
		8.90	1.78		.63	7.35			8.60	1.88	7.35	.63
No. 5.....	6.72	8.50	1.78		.63	7.35		6.72	8.60	1.88	7.35	.63
		8.50	1.78		.63	7.35			8.60	1.88	7.35	.63
Minimum.....	6.72	8.30	.75		.56	7.35		6.72	8.36	.70	7.35	.62
Maximum.....	7.75	8.67	1.78		.63	7.72		7.90	8.81	1.88	7.74	.63
Weighted average.....	6.88							6.90				

Company.	November.										December.			
	Cost price.	Household.		Industrial.		Yard.		Cost price.	Household.		Industrial.		Yard.	
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.35	\$8.60	\$1.25					\$7.60	\$8.60	\$1.00				
		8.60	1.25						8.60	1.00				
		8.92	1.80			\$8.22	\$1.10		8.95	1.85			\$7.79	\$0.69
No. 2.....	7.12	8.92	1.80			8.22	1.10	7.10	8.95	1.85			7.79	.69
		8.92	1.80						8.95	1.85				
		8.60	1.50					7.10	8.52	1.42				
No. 3.....	7.10	8.38	1.28						8.58	1.48				
		8.60	1.50						8.60	1.50				
		8.60	.70					8.15	8.60	.45				
No. 4.....	7.90	8.60	.70						8.60	.45				
		8.60	1.88			7.35	.63		8.60	1.88			7.35	.63
		8.60	1.88			7.35	.63	6.72	8.60	1.88			7.35	.63
No. 5.....	6.72	8.60	1.88			7.35	.63		8.60	1.88			7.35	.63
Minimum.....	6.72	8.38	.70			7.35	.63	6.72	8.52	.45			7.35	.63
Maximum.....	7.90	8.92	1.88			8.22	1.10	8.15	8.95	1.88			7.79	.69
Weighted average.....	6.87							6.85						

TABLE 62.—*Milwaukee, Wis.*—Retailer's cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite by sizes and by principal classes of business, for 5 representative dealers, September—December, 1916—Continued.

CHESTNUT.

Company.	September.						October.					
	Household.		Industrial.		Yard.		Household.		Industrial.		Yard.	
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.		Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.	\$7.60	\$8.75	\$1.15				\$7.60	\$8.85	\$1.25			
		8.75	1.15					8.85	1.25			
		8.89	1.51					9.10	1.25			
No. 2.	7.38	8.89	1.51	\$7.80	\$0.42		7.39	9.10	1.71	\$7.80	\$0.47	
		8.89	1.51	7.80	.42			9.10	1.71	7.80	.47	
No. 3.	7.35	8.50	1.15				7.35	8.64	1.29			
		8.50	1.15					8.79	1.23			
		8.58	1.23					8.85	.70			
No. 4.	8.00	8.75	.75				8.15	8.85	.70			
		8.75	.75					8.85	.70			
		8.75	1.78					8.85	1.88			
No. 5.	6.97	8.75	1.78	7.60	.63		6.97	8.85	1.88	7.60	.63	
		8.75	1.78	7.60	.63			8.85	1.88	7.60	.63	
Minimum.	6.97	8.50	.75	7.60	.42		6.97	8.58	.70	7.60	.47	
Maximum.	8.00	8.89	1.78	7.80	.63		8.15	9.10	1.88	7.80	.63	
Weighted average.	7.08						7.07					

Company.	November.						December.					
	Cost price.	Household.		Industrial.		Yard.	Cost price.	Household.		Industrial.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$7.60	\$8.85	\$1.25				\$7.85	\$8.85	\$1.00			
		8.85	1.25					8.85	1.00			
		8.85	1.25					8.85	1.00			
No. 2.....	7.35	9.22	1.87			\$8.20	7.35	9.22	1.87			\$8.18
		9.22	1.87			8.20		9.22	1.87			8.18
		8.76	1.41					8.80	1.45			8.18
No. 3.....	7.35	8.73	1.38				7.35	8.85	1.50			
		8.78	1.43					8.85	1.50			
		8.85	.70					8.85	.45			
No. 4.....	8.15	8.85	.70				8.40	8.85	.45			
		8.85	.70					8.85	.45			
		8.85	1.88			7.60		8.85	1.88			7.60
No. 5.....	6.97	8.85	1.88			7.60		8.85	1.88			7.60
		8.85	1.88			7.60		8.85	1.88			7.60
Minimum.....	6.97	8.73	.70			7.60		8.80	.45			7.60
Maximum.....	8.15	9.22	1.88			8.20		9.22	1.88			8.18
Weighted average.....	7.04						7.05					

TABLE 62.—*Milwaukee, Wis.—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes and by principal classes of business for 5 representative dealers, September—December, 1916—Continued.*
PEA.

Company.	September.						October.					
	Cost price.	Household.		Industrial.		Yard.	Cost price.	Household.		Industrial.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$6.25	\$7.40	\$1.15				\$6.25	\$7.50	\$1.25			
		7.40	1.15					7.50	1.25			
		7.40	1.15					7.50	1.25			
No. 2.....	6.06	7.55	1.49			\$6.63	6.13	7.71	1.58			\$6.84
		7.55	1.49			6.63		7.71	1.58			6.84
		7.55	1.49					7.71	1.58			6.84
No. 3.....	6.00	7.02	1.02				6.00	7.35	1.35			
		7.14	1.14					7.36	1.36			
		7.40	1.40					7.50	1.50			
No. 4.....	6.65	7.40	.75				6.80	7.50	.70			
		7.40	.75					7.50	.70			
		7.40	.75					7.50	.70			
No. 5.....	5.67	7.40	1.73			6.25	5.67	7.50	1.83			6.25
		7.40	1.73			6.25		7.50	1.83			6.25
		7.40	1.73			6.25		7.50	1.83			6.25
Minimum.....	5.67	7.02	.75			6.25	5.67	7.35	.70			6.25
Maximum.....	6.65	7.55	1.73			6.63	6.80	7.71	1.83			6.84
Weighted average.....	5.80						5.80					

Company.	November.						December.					
	Household.		Industrial.		Yard.		Household.		Industrial.		Yard.	
	Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.		Cost price.	Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$6.25	\$7.50	\$1.25					\$7.50	\$1.00			
		7.50	1.25					7.50	1.00			
		7.99	1.99					7.82	1.40			
No. 2.....	6.00	7.99	1.99	\$7.34	\$1.34		6.42	7.82	1.40	\$7.82	\$1.40	
		7.99	1.99	7.34	1.34			7.82	1.40	7.82	1.40	
		7.47	1.47					7.50	1.50			
No. 3.....	6.00	7.50	1.50				6.00	7.50	1.50			
		7.50	1.50					7.50	1.50			
		7.50	.70					7.50	.45			
No. 4.....	6.80	7.50	.70				7.05	7.50	.45			
		7.50	.70					7.50	.45			
		7.50	1.83					7.50	1.83			
No. 5.....	5.67	7.50	1.83	6.25	.58		5.67	7.50	1.83	6.25	.58	
		7.50	1.83	6.25	.58			7.50	1.83	6.25	.58	
Minimum.....	5.67	7.47	.70	6.25	.58		5.67	7.50	.45	6.25	.58	
Maximum.....	6.80	7.99	1.99	7.34	1.34		7.05	7.82	1.83	7.82	1.40	
Weighted average.....	5.80						5.81					

TABLE 62. — *Milwaukee, Wis.—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business for 5 representative dealers, September, —, December, 1916—Continued.*

BUCKWHEAT.

Company.	September.						October.					
	Cost price.	Household.		Industrial.		Yard.	Cost price.	Household.		Industrial.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$4.50	\$5.75 5.75 5.75	\$1.25 1.25 1.25				\$4.50	\$5.75 5.75 5.75	\$1.25 1.25 1.25			
No. 2.....	4.25	5.95 5.95 5.95	1.70 1.70 1.70	\$5.10 3.19 3.19	\$0.94 .94 .94		4.10	6.02 6.02 6.02	1.92 1.92 1.92			\$5.27 5.27 5.27
No. 3.....	4.25			\$5.75 5.75 5.75	\$1.50 1.50 1.50		4.25			\$5.75 5.75 5.75	\$1.50 1.50 1.50	
No. 4.....	4.90	5.75 5.75 5.75	.85 .85 .85				5.05	5.75 5.75 5.75	.70 .70 .70			
No. 5.....	3.96	5.75 5.75 5.75	1.79 1.79 1.79	5.25 5.25 5.25	1.29 1.29 1.29	4.50 4.50 4.50	3.96	5.75 5.75 5.75	1.79 1.79 1.79	5.25 5.25 5.25	1.29 1.29 1.29	4.50 4.50 4.50
Minimum.....	3.96	5.75	.85	5.25	1.29	4.50	3.96	5.75	.70	5.25	1.29	4.50
Maximum.....	4.90	5.95	1.79	5.75	1.50	5.19	5.05	6.02	1.92	5.75	1.50	5.27
Weighted average.....							4.03					

Company.	November.						December.					
	Cost price.	Household.		Industrial.		Yard.	Cost price.	Household.		Industrial.		Yard.
		Sale price.	Gross margin.	Sale price.	Gross margin.			Sale price.	Gross margin.	Sale price.	Gross margin.	
No. 1.....	\$4.50	\$5.75 5.75 5.75	\$1.25 1.25 1.25				\$5.09	\$5.75 5.75 5.75	\$0.66 .66 .66			
No. 2.....	4.25	5.99 5.99 5.99	1.74 1.74 1.74		\$1.21 5.46 5.46		4.50	6.42 6.42 6.42	1.92 1.92 1.92			
No. 3.....	4.25			\$5.75 5.75 5.75	\$1.50 1.50 1.50		4.35			\$5.75 6.25 6.25	\$1.40 1.90 1.90	
No. 4.....	5.05	5.75 5.75 5.75	.70 .70 .70				5.59	5.75 6.25 6.25	.16 .66 .66			
No. 5.....	3.96	5.75 5.75 5.75	1.79 1.79 1.79	5.25 5.25 5.25	1.29 4.50 4.50	.54		5.25 5.75 5.75	1.79 1.79 1.79	5.25 5.25 5.25	1.29 1.29 1.29	\$0.54 4.50 4.50
Minimum.....	3.96	5.75	1.79	5.25	4.50	.54	3.96	5.75	1.79	5.25	1.29	.54
Maximum.....	5.05	5.99	1.79	5.75	5.46	1.21	5.59	6.42	1.92	6.25	1.90	.54
Weighted average.....	4.03						4.03					

Comparing the range of margins for the three classes of business—household sales, yard sales, and industrial sales—we find the lowest margins were realized on yard sales. On these yard sales the margins shown vary from 1 cent to \$1.40 per ton, showing a range of \$1.39 between the highest and lowest margin. The retailer has no delivery expense to meet on this business, and all sizes from egg to dust are sold in this way. On industrial sales, covering only buckwheat and dust, margins of from \$1.04 to \$1.90 are shown, the range between the maximum and the minimum being 86 cents on this class of sales. Industrial sales, for which only two of the five firms show margins, is the least important of the three classes. On household sales, covering all sizes from egg to buckwheat, margins shown vary from 45 cents to \$1.99 per net ton, a range of \$1.54 between the highest and the lowest margin shown. This is by far the most important of the three classes of sales.

As far as sizes and classes of business are concerned, margins of a given firm on a given size and class of business were comparatively uniform. On prepared sizes the margins were slightly larger than on steam sizes, the largest margins being realized on egg coal. Differences as between dealers were due to differences in cost of coal to the dealer, the selling price for different firms being fairly uniform for any given size and class of business.

Taking the margins by months there generally was a slight increase during the period from September to November, inclusive, with a slight falling off in December as compared with November. This was due to the slightly higher price paid by dealers in December, the retail prices remaining generally the same. The differences between the upper and lower margins for the entire four months correspond almost exactly to the differences between the maximum and minimum cost prices of coal to retailers. Further, it appears that there was no unreasonable increase in the price of anthracite sold in Milwaukee, and that fluctuations in retail prices reflected merely the fluctuations in the cost prices to the leaders in the trade.

A distinguishing feature with respect to the retail price of anthracite coal in Milwaukee in 1916 consists in the fact that the prices paid by consumers in Milwaukee were considerably lower than the retail prices in Chicago. A comparison of the price circulars of the Milwaukee-Western Fuel Co. and of the Consumers Co., of Chicago, makes this clear:

TABLE 63.—*Retail circular prices, per net ton, of the Milwaukee-Western Fuel Co. and the Consumers Co. of Chicago, September 1, 1916—February 1, 1917.*

Size.	Sept. 1, 1916.		Oct. 1, 1916.		Nov. 1, 1916.	
	Milwaukee-Western Fuel Co.	Consumers Co.	Milwaukee-Western Fuel Co.	Consumers Co.	Milwaukee-Western Fuel Co.	Consumers Co.
Broken.....		\$8. 25		\$8. 50		\$9. 00
Egg.....	\$8. 50	8. 50	\$8. 60	9. 00	\$8. 60	9. 50
Stove.....	8. 50	8. 50	8. 60	9. 00	8. 60	9. 50
Nut.....	8. 75	8. 75	8. 85	9. 50	8. 85	9. 50
Pea.....	7. 40	7. 40	7. 50	7. 80	7. 50	8. 50
Buckwheat.....	{ ¹ 5. 25 5. 75 }	6. 00	{ ¹ 5. 25 5. 75 }	6. 50	{ ¹ 5. 25 5. 75 }	7. 00

Size.	Dec. 1, 1916.		Jan. 16, 1917.		Jan. 22, 1917.		Feb. 1, 1917.	
	Milwaukee-Western Fuel Co.	Consumers Co.	Milwaukee-Western Fuel Co.	Consumers Co.	Milwaukee-Western Fuel Co.	Consumers Co.	Milwaukee-Western Fuel Co.	Consumers Co.
Broken.....		\$10. 00	\$8. 85		\$8. 85			\$9. 50
Egg.....	\$8. 60	10. 50	9. 10		9. 10			9. 50
Stove.....	8. 60	10. 50	9. 10		9. 10			9. 50
Nut.....	8. 85	10. 50	9. 35		9. 35			9. 50
Pea.....	7. 50	9. 50	7. 75		7. 75			8. 50
Buckwheat.....	{ ¹ 5. 25 5. 75 }	8. 00	6. 00		6. 50			7. 00

¹ For steam and manufacturing purposes.

The fact that Milwaukee gets nearly all of its anthracite coal by lake, where rates are cheaper, while the bulk of Chicago's supply of anthracite comes there by rail, may account in part for cheaper coal in Milwaukee, the difference between the all-rail freight to Chicago and the rail-and-lake freight to Milwaukee was \$1.17. The costs of delivery have increased in both cities, perhaps slightly more in Chicago. It was stated by several prominent Milwaukee city officials and coal dealers to agents of the Commission that two searching investigations of the local coal trade made in recent years by the district attorney's office may have exercised a deterrent effect on local dealers, causing them not to raise prices. No premium coal seems to have been handled in Milwaukee.

Margins of dock companies.—The following table presents margins of two leading Milwaukee dock men. Both dock men handle the coal of railroad coal companies exclusively.

TABLE 64.—*Milwaukee, Wis.—Gross margin per gross ton of anthracite dock companies.*

Market.	Dock man.	Source of coal.	Size of coal.	Percentage of all business, September-December.	1916			
					Sept.	Oct.	Nov.	Dec.
Milwaukee.....	No. 1..	Railroad (consignment).	Prepared..	<i>Per cent.</i> 82	\$0. 700	\$0. 700	\$0. 700	\$0. 700
		do.....	Steam.....	18	. 617	. 617	. 610	. 617
		Weighted average—all business.	All.....	100	. 684	. 682	. 686	. 689
Do.....	No. 2..	Railroad (consignment).	Prepared..	84	. 784	. 784	. 784	. 784
		do.....	Steam.....	16	. 784	. 784	. 784	. 784
		Weighted average—all business.	All.....	100	. 781	. 784	. 784	. 784
Weighted average of all business.	.....	.....	.....	.....	. 697	. 701	. 706	. 711
Total tonnage sold.	.....	.....	.....	.....	43, 189	44, 305	40, 146	35, 264

From the above table, showing the margins of two representative dock companies of Milwaukee, it will be seen that the margin of each concern remained constant throughout the entire period from September to December. This is due to the fact that both dock companies handled railroad consignment coal on long contracts providing for a fixed commission. The margin of company No. 2 is slightly higher than that of No. 1, the two dock companies getting their anthracite from two different railroad coal companies. Furthermore, it will be noted that concern No. 2 has the same commission (78 cents) on both prepared and steam sizes, while the commission of concern No. 1 on prepared sizes (70 cents) is higher than on steam sizes (62 cents).

The ratio between the tonnage handled of prepared and steam sizes is about the same in the case of both concerns, the tonnage of prepared sizes handled being approximately five times that of steam sizes.

The total tonnage sold by both concerns increased slightly from September to October, but decreased approximately 8,000 tons for the whole period from September to December.

Margins of jobbers.—The following table shows the gross margins of the anthracite business of two representative Milwaukee jobbers:

TABLE 65.—*Milwaukee, Wis.—Gross margin per gross ton of anthracite jobbers.*

Market.	Jobber.	Source of coal.	Size of coal.	Percentage of all business, September-December.	1916			
					Sept.	Oct.	Nov.	Dec.
Milwaukee.....	No. 1.	Railroad.....	Prepared.....	20	\$0.279	\$0.281	\$0.281	\$0.436
	No. 1.	do.....	Steam (not including dust).	3	.287	.283	.....	.....
	No. 1.	Jobber.....	Prepared.....	3	.....	.....	.739	.....
	No. 1.	do.....	Steam (not including dust).	7	.....	.....	.282	1.290
	No. 1.	Railroad and jobber.	Dust.....	67	.212	.471	.489	.413
	No. 1.	Weighted average, all business.	All.....	100	.228	.418	.470	.198
	No. 2.	Railroad, weighted average, all business.	do.....	100	.003	.032	.846	1.088
Total tonnage sold.....					3,973	4,021	2,890	2,248

¹ Loss.

The table shows that the gross margin per gross ton of the two Milwaukee jobbers during the last third of 1916 had little stability. Jobber No. 1 had margins of \$0.279, \$0.281, \$0.281, and \$0.436 on prepared sizes, the margins on steam sizes being about the same. On dust the margin was doubled, increasing from \$0.212 in September to \$0.471 in October and \$0.489 in November, with a slight drop to \$0.413 in December. The weighted average margin on all business of the first jobber was doubled in November (\$0.470) as compared with the September margin of \$0.228, dropping to \$0.198 in December. The margin on steam coal, amounting to \$0.290 in December, involved an actual loss.

It was different with the other jobber, whose very small margin of \$0.003 in September rose to \$0.032 in October, \$0.846 in November, and to \$1.088 in December.

MINNEAPOLIS AND ST. PAUL.

Transportation.—Almost 100 per cent of the anthracite sold in Minneapolis and St. Paul and in adjacent territory comes from Buffalo and Erie by lake via the docks at Duluth and Superior. All-rail anthracite coal shipped to the Twin Cities is an almost negligible factor in the local coal market in normal years.

The rate by lake from Buffalo to the docks at Duluth and Superior in 1916 ranged from 33 cents to \$1.40 per gross ton. The freight rate from the docks to Minneapolis and St. Paul amounts to \$1.34 per gross ton. Adding the freight rate of \$2 per gross ton from mines to Buffalo and 25 cents per gross ton for loading at Buffalo, the total rate from mines via Buffalo and Duluth or Superior to the Twin Cities amounts to from \$3.92 to \$4.99 per gross ton. The all-rail rate via Chicago from mines to the Twin Cities is \$5.99.

Sources of supply, and local distribution.—The coal dock companies with docks at Duluth and Superior are the controlling factors in the Minneapolis and St. Paul coal market. The wholesale trade is ex-

clusively in their hands, and about half of them also operate retail yards. The leading dock companies, arranged alphabetically, are:

Berwind Fuel Co.
Carnegie Dock & Fuel Co.
Clarkson Coal & Dock Co.
Great Lakes Coal & Dock Co.
M. A. Hanna Coal Co.
Lehigh Valley Coal Sales Co.

Northern Coal & Dock Co.
Northwestern Fuel Co.
Philadelphia & Reading Coal & Iron Co.
Pittsburgh & Ashland Coal & Dock Co.
Pittsburgh Coal Co.

Anthracite coal is shipped by the producing companies on consignment to the dock companies at Duluth and Superior. The coal is unloaded, screened, stored, and prepared for the market at the docks. From the docks it is shipped to points in Minnesota, Iowa, the Dakotas, and the northwestern part of Wisconsin. A few scattered cars go to Nebraska and Montana.

Apparently there is little jobbing in anthracite coal in Minneapolis and St. Paul, due to the proximity of docks with large storage capacity.

In addition to the retail yards of the dock companies, there are about 30 local "track" dealers or retailers having coal yards in Minneapolis and a smaller number in St. Paul. Approximately 140 retailers in Minneapolis have no storage capacity.

Local shortage and its causes.—The total receipts of anthracite coal at the Duluth-Superior docks during the navigation season of 1916 indicate a considerable shortage as compared with the receipts in former years. In 1916 the receipts of anthracite at the docks amounted to 1,536,976 tons, as compared with 1,735,506 tons in 1915, or a decrease of 198,530 tons. At the opening of navigation in 1916 the supply on hand at the docks amounted to 423,645 tons of anthracite, making the total tonnage of anthracite available for sale at the docks from April 1, 1916, to January 1, 1917, 1,960,621 tons. On January 1, 1917, there were on hand at the docks 396,232 tons of anthracite, leaving 1,564,389 tons disposed of from April 1, 1916, to January 1, 1917. Of this tonnage approximately 930,000 tons were sold wholesale from cars at the docks, 425,000 tons were shipped by the dock companies to their retail yards in Minneapolis and St. Paul, and the remainder was disposed of otherwise.

It was estimated in the trade that the stocks of anthracite on hand at the docks in January were 253,698 tons short of the prospective demand during the period from January 1, 1917, until the opening of navigation.

Dock companies' margins.—The dock companies with docks at Duluth and Superior handle anthracite coal on consignment. Their normal gross margin is approximately 70 cents per net ton since they are granted a discount of that amount off the railroad circular price f. o. b. cars at the docks at Superior or Duluth and customarily sell at circular. At least one of the dock companies sold anthracite at wholesale below its published circular prices, allowing a discount of 10 cents per ton to two dealers.

The following table indicates the gross margin per gross ton of two dock companies (one in Minneapolis and the other in St. Paul).

TABLE 66.—*Minneapolis and St. Paul—Gross margin per gross ton of anthracite dock companies.*

Market.	Dock company.	Source of coal.	Size of coal.	Percentage of all business, Sept.—Dec.	1916.			
					Sept.	Oct.	Nov.	Dec.
Minneapolis....	No. 1..	Railroad (consign- ment).	Prepared..	<i>Per cent.</i> 65	\$0.784	\$0.784	\$0.784	\$0.784
		do.....	Steam.....	35	.784	.784	.784	.784
		Weighted average, all business.	All.....	100	.784	.784	.784	.784
St. Paul.....	No. 1..	Railroad (consign- ment).	Prepared..	89	.784	.784	.784	.784
		do.....	Steam.....	11	.784	.784	.784	.784
		Weighted average, all business.	All.....	100	.784	.784	.784	.784
Total weighted average of all business (Twin Cities).....					.784	.784	.784	.784
Total tonnage sold.....					8,754	11,765	15,830	16,568

¹ Car-lot sales, Minneapolis and vicinity.

An inspection of the preceding table shows absolutely the same margin for both the Minneapolis dock company and the St. Paul dock company. For the entire period from September to December the above data show no variation either on prepared or on steam sizes. This evenness and stability is accounted for by the fact that both concerns handle railroad consignment coal, and that both get the same commission on long contracts with eastern anthracite producing companies.

The total tonnages sold by both concerns increased each month, the tonnage in December being double that of September.

Wholesale prices to dealers.—The wholesale circular prices of anthracite to dealers at yards in Minneapolis and St. Paul differed slightly in certain months during 1916 between the various wholesale dealers. Table 67 indicates the wholesale prices to dealers by two of the leading wholesalers in the Twin Cities.

TABLE 67.—*Wholesale prices of anthracite, to dealers at yards, at Minneapolis and St. Paul, Minn., April—December, 1916.*

[Per net ton.]

Date.	Grate.		Egg.		Stove.		Chestnut.		Pea.		Buck-wheat.	
	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.
Apr. 1.....	\$8.10	\$8.10	\$8.35	\$8.35	\$8.35	\$8.35	\$8.60	\$8.60	\$7.05	\$7.05	\$5.50	\$5.50
May 1.....	8.10	.....	8.35	8.20	8.35	8.20	8.60	8.45	7.05	7.10	5.50	5.50
June 1.....	8.55	.....	8.80	8.80	8.80	8.80	9.05	9.05	7.70	7.70	6.25	6.25
July 1.....	8.65	.....	8.90	8.90	8.90	8.90	9.15	9.15	7.80	7.80	6.25	6.25
Aug. 1.....	8.65	.....	8.90	8.75	8.90	8.75	9.15	9.00	7.80	7.65	6.25	6.00
Sept. 1.....	8.60	.....	8.85	8.85	8.85	8.85	9.10	9.10	7.75	7.75	6.00	6.00
Oct. 1.....	8.60	8.60	8.85	8.85	8.85	8.85	9.10	9.10	7.75	7.75	6.00	6.00
Nov. 13 ¹	8.60	.....	8.85	8.85	8.85	8.85	9.10	9.10	7.75	7.75	6.50	6.50
Dec. 12 ²	8.85	.....	9.10	9.10	9.10	9.10	9.35	9.35	8.00	8.00	6.75	6.75

¹ The wholesale prices of the Northwestern Fuel Co. on Nov. 1, 1916, were advanced 50 cents on pea coal. The wholesale prices of the Pittsburgh Coal Co. on Nov. 13, 1916, were advanced 50 cents on pea coal.

² The wholesale prices of the Northwestern Fuel Co. were advanced on all sizes on Dec. 12, 1916. The wholesale prices of the Pittsburgh Coal Co. were advanced on all sizes on Dec. 9, 1916.

From the above tables it will be seen that the wholesale prices of the two companies were the same on all grades of anthracite on April 1, 1916, having remained stationary since September, 1915. After some variations in May, 1916, the prices of the two companies were about the same again during the rest of the year except for some variations in August and December.

Apparently no premium coal was handled at Minneapolis and St. Paul.

Retail prices.—The circular prices of retailers to consumers in Minneapolis and St. Paul followed closely the changes that took place in the wholesale circular prices. The total advances in the circular prices of retailers to consumers from April to December, 1916, amounted to \$1 per ton on prepared sizes, \$1.20 on pea coal, and \$1.50 on buckwheat. Table 68 indicates the retail circular prices to consumers of two leading retailers.

TABLE 68.—*Retail delivered prices of anthracite at Minneapolis and St. Paul, Minn., April—December, 1916.*

[Per net ton.]

Date.	Grate.		Egg.		Stove.		Chestnut.		Pea.		Buckwheat.	
	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.	Northwestern Fuel Co., St. Paul, Minn.	Pittsburgh Coal Co., Minneapolis, Minn.
April 1.....	\$9.10	\$9.10	\$9.35	\$9.35	\$9.35	\$9.35	\$9.60	\$9.60	\$8.05	\$8.05	\$6.50	\$6.50
May 1.....	9.10	.....	9.35	9.35	9.35	9.20	9.60	9.45	8.05	8.10	6.50	6.50
June 1.....	9.55	.....	9.80	9.80	9.80	9.80	10.05	10.05	8.70	8.70	7.25	7.25
July 1.....	9.65	.....	9.90	9.90	9.90	9.90	10.15	10.15	8.80	8.80	7.25	7.25
Aug. 1.....	9.65	.....	9.90	10.00	9.90	10.00	10.15	10.25	8.80	8.90	7.25	7.25
Sept. 1.....	9.85	.....	10.10	10.10	10.10	10.10	10.35	10.35	9.00	9.00	7.25	7.25
Oct. 1.....	9.85	9.85	10.10	10.10	10.10	10.10	10.35	10.35	9.00	9.00	7.25	7.25
Nov. 13 ¹	9.85	.....	10.10	10.10	10.10	10.10	10.35	10.35	9.00	9.00	7.75	7.75
Dec. 12 ²	10.10	.....	10.35	10.35	10.35	10.35	10.60	10.60	9.25	9.25	8.00	8.00

¹ The prices of the Northwestern Fuel Co. changed on Nov. 13, 1916, while those of the Pittsburgh Coal Co. became effective Nov. 1, 1916.

² The prices of the Northwestern Fuel Co. changed on Dec. 12, 1916, while those of the Pittsburgh Coal Co. became effective Dec. 9, 1916.

From the above table it will be seen that the circular prices of the two retail dealers were the same at the beginning and at the close of the year, varying slightly in May and August.

Retailers' margins.—The most important point to be noted in respect to the retailers' margins in the Twin Cities is their stability. The proximity of the Superior and Duluth docks with a constant and fixed supply of anthracite seems to account for this situation. The accompanying table shows the margins of three representative retailers.

The cost prices shown are actual average cost prices of all coal in stock or received during each month. The sale prices, as stated below are "typical" sales, not actual average prices received.

TABLE 69.—*Minneapolis and St. Paul—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for three representative dealers, September–December, 1916.*

[Out of gross margin must come cost of doing business, degradation and shrinkage, and net profit. See pp. 150 to 158.]

[Wherever in this table 3 prices are shown, they represent prices around the 5th, 15th, and 25th of the month.]

BROKEN.

Company.	September.						October.							
	Cost price.	Household.		Industrial.		Yard.		Cost price.	Household.		Industrial.		Yard.	
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.64	{ \$10.03 10.03 10.03	{ \$2.39 2.39 2.39	{	{	{ \$8.60 8.60 8.60	{ \$0.96 .96 .96	\$7.59	{ \$9.66 9.66 9.66	{ \$2.07 2.07 2.07	{	{	{	{
No. 1.....	\$7.56	{ \$9.82 9.82 9.82	{ \$2.26 2.26 2.26	{	{	{ \$8.60 8.60 8.60	{ \$1.04 1.04 1.04	\$7.63	{ \$10.10 10.10 10.10	{ \$2.47 2.47 2.47	{	{	{ \$8.81 8.81 8.81	{ \$1.18 1.18 1.18

EGG.

No.	September.							October.						
No. 1.....	\$7.77	\$10.15 10.15 10.15	\$2.38 2.38 2.38	\$9.68 9.68 9.68	\$1.91 1.91 1.91	\$8.85 8.85 8.85	\$1.08 1.08 1.08	\$7.86	\$10.26 10.26 10.26	\$2.40 2.40 2.40	..... ..... .....	..... ..... .....	\$8.85 8.85 8.85	\$0.99 .99 .99
No. 2.....	7.72	10.02 10.10 10.10	2.30 2.38 2.38	..... ..... .....	..... ..... .....	8.77 8.82 8.85	1.05 1.10 1.13	7.80	10.10 10.10 10.10	2.30 2.30 2.30	..... ..... .....	..... ..... .....	8.85 8.85 8.85	1.05 1.05 1.05
No. 3.....	7.69	10.06 10.06 10.06	2.37 2.37 2.37	10.06 10.06 10.06	2.37 2.37 2.37	8.85 8.85 8.85	1.16 1.16 1.16	7.85	10.10 10.10 10.10	2.25 2.25 2.25	\$10.10 10.10 10.10	\$2.25 2.25 2.25	8.85 8.85 8.85	1.00 1.00 1.00
No.	November.							December.						
No. 1.....	\$7.90	\$10.17 10.17 10.17	\$2.27 2.27 2.27	..... ..... .....	..... ..... .....	\$8.86 8.86 8.86	\$0.96 .96 .96	\$7.98	\$10.34 10.34 10.34	\$2.36 2.36 2.36	..... ..... .....	..... ..... .....	\$9.03 9.03 9.03	\$1.05 1.05 1.05
No. 2.....	7.84	10.10 10.10 10.10	2.26 2.26 2.26	..... ..... .....	..... ..... .....	8.85 8.85 8.85	1.01 1.01 1.01	8.00	10.10 10.35 10.35	2.10 2.35 2.35	..... ..... .....	..... ..... .....	8.90 9.10 9.10	.90 1.10 1.10
No. 3.....	7.90	10.10 10.10 10.10	2.20 2.20 2.20	\$10.10 10.10 10.10	\$2.20 2.20 2.20	8.85 8.85 8.85	.95 .95 .95	7.94	10.57 10.57 10.57	2.63 2.63 2.63	\$10.57 10.57 10.57	\$2.63 2.63 2.63	...............	...............

TABLE 69.—*Minneapolis and St. Paul—Retailers' cost prices, typical sale prices, and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for three representative dealers, September–December, 1916—Continued.*

STOVE.

Company.	September.							October.						
	Cost price.	Household.		Industrial.		Yard.		Cost price.	Household.		Industrial.		Yard.	
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$7.78	\$10.20 10.20 10.20 10.02 10.10 10.10	\$2.42 2.42 2.42 2.22 2.30 2.30	..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... .....	\$8.84 8.84 8.84 8.77 8.82 8.85	\$1.06 1.06 1.06 .97 1.02 1.05	\$7.96	\$10.24 10.24 10.24 10.10 10.10 10.10	\$2.28 2.28 2.28 2.21 2.21 2.21	..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... .....	\$8.84 8.84 8.84 8.85 8.85 8.85	\$0.88 .88 .88 .96 .96 .96
No. 2.....	7.80	9.83 9.83 9.83	1.77 1.77 1.77	\$9.83 9.83 9.83	\$1.77 1.77 1.77	8.85 8.85 8.85	.79 .79 .79	8.06	9.88 9.88 9.88	1.82 1.82 1.82	\$9.88 9.88 9.88	\$1.82 1.82 1.82	8.85 8.85 8.85	.79 .79 .79

	November.							December.						
No. 1.....	\$8.01	\$10.21	\$2.20	.....	.....	\$8.85	\$0.84	\$8.10	\$10.39	\$2.29	.....	.....	\$9.02	\$0.92
		10.21	2.20	.....	.....	8.85	.84		10.39	2.29	.....	.....	9.02	.92
		10.21	2.20	.....	.....	8.85	.84		10.39	2.29	.....	.....	9.02	.92
No. 2.....	7.96	10.10	2.14	.....	.....	8.85	.89	8.07	10.10	2.03	.....	.....	8.90	.83
		10.10	2.14	.....	.....	8.85	.89		10.35	2.28	.....	.....	9.10	1.03
		10.10	2.14	.....	.....	8.85	.89		10.35	2.28	.....	.....	9.10	1.03
No. 3.....	7.99	10.00	2.01	\$10.00	\$2.01	8.85	.86	7.99	10.45	2.46	\$10.45	\$2.46	.....	.....
		10.00	2.01	10.00	2.01	8.85	.86		10.45	2.46	10.45	2.46	.....	.....
		10.00	2.01	10.00	2.01	8.85	.86		10.45	2.46	10.45	2.46	.....	.....

CHESTNUT.

	September.							October.							
No. 1.....	\$8.01	{ \$10.39 10.39 10.39 10.00 10.35 10.35 10.21 10.21 10.21	{ \$2.38 2.38 2.38 1.94 2.29 2.29 1.98 1.98 1.98	{ \$10.21 10.21 10.21	{ \$1.98 1.98 1.98	{ \$9.09 9.09 9.09 9.00 9.08 9.10 9.10 9.10 9.10	{ \$1.08 1.08 1.08 1.02 1.04	No. 2.....	\$8.14	{ \$10.43 10.43 10.43 10.35 10.35 10.35 10.16 10.16 10.16	{ \$2.29 2.29 2.29 2.24 2.24 2.24 1.91 1.91 1.91	{ \$10.16 10.16 10.16	{ \$1.91 1.91 1.91	{ \$9.08 9.08 9.08 9.10 9.10 9.10 9.10 9.10 9.10	{ \$0.94 .94 .94
No. 3.....	8.06							8.11							
No. 3.....	8.23							8.25							

	November.							December.							
No. 1.....	\$8.25	{ \$10.41 10.41 10.41 10.35	{ \$2.16 2.16 2.16 2.17	{	{ 9.10 9.10 9.10	{ \$9.10 .85 .85 .92	{ \$0.85	No. 2.....	8.18	{ 10.35 10.35 10.35 10.24	{ 2.17 2.17 2.17 1.97	{ \$10.24	{ 9.10 9.10 \$1.97	{ 9.10 9.10 9.10	{83 .83 .83
No. 3.....	8.27	{ 10.24 10.24 10.24	{ 1.97 1.97 1.97	{ 10.24 10.24 10.24	{ 1.97 1.97 1.97	{ 9.10 9.10 9.10	{83 .83								

TABLE 69.—*Minneapolis and St. Paul*——Retailers' coal prices, typical sale prices and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for three representative dealers, September—December, 1916—Continued.

PEA.

Company.	September.							October.						
	Cost price.	Household.		Industrial.		Yard.		Cost price.	Household.		Industrial.		Yard.	
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.
No. 1.....	\$6.97	\$9.10 9.10 9.10 8.90	\$2.13 2.13 2.13 1.98	..... ..... ..... .....	..... ..... ..... .....	\$7.76 7.76 7.76 7.65	\$0.79 .79 .79 .73	\$7.06	\$9.11 9.11 9.11 9.00	\$2.05 2.05 2.05 2.07	..... ..... ..... .....	..... ..... ..... .....	\$7.79 7.79 7.79 7.75	\$0.73 .73 .73 .82
No. 2.....	6.92	9.00 9.00 8.63	2.08 2.08 1.57	..... ..... \$8.63	..... ..... \$1.57	7.70 7.72 7.75	.80 .78 .69	6.93	9.00 9.00 8.75	2.07 2.07 1.59	..... ..... \$8.75	..... ..... \$1.59	7.75 7.75 7.75	.82 .82 .59
No. 3.....	7.06	8.63 8.63 8.63	1.57 1.57 1.57	8.63 8.63 8.63	1.57 1.57 1.57	7.75 7.75 7.75	.69 .69 .69	7.16	8.75 8.75 8.75	1.59 1.59 1.59	8.75 8.75 8.75	1.59 1.59 1.59	7.75 7.75 7.75	.59 .59 .59
	November.							December.						
No. 1.....	\$7.03	\$9.12 9.12 9.12 9.00	\$2.09 2.09 2.09 2.06	..... ..... ..... .....	..... ..... ..... .....	\$7.80 7.80 7.80 7.75	\$0.77 .77 .77 .81	\$7.07	\$9.26 9.26 9.26 9.25	\$2.19 2.19 2.19 2.31	..... ..... ..... .....	..... ..... ..... .....	\$7.93 7.93 7.93 8.00	\$0.86 .86 .86 1.06
No. 2.....	6.94	9.00 9.00 8.72	2.06 2.06 1.65	..... ..... \$8.72	..... ..... \$1.65	7.75 7.75 7.75	.81 .81 .68	6.94	9.25 9.25 9.26	2.31 2.31 2.26	..... ..... \$9.26	..... ..... \$2.26	8.00 8.00 9.26	1.06 1.06 2.26
No. 3.....	7.07	8.72 8.72 8.72	1.65 1.65 1.65	8.72 8.72 8.72	1.65 1.65 1.65	7.75 7.75 7.75	.68 .68 .68	7.00	9.26 9.26 9.26	2.26 2.26 2.26	..... ..... 9.26	..... ..... 2.26	..... ..... 2.26	...............

BUCKWHEAT.																
		September.						October.								
No. 1.....	\$5.36	{	\$7.40	\$2.04	\$6.03	\$0.67	}	\$5.36	{	\$7.28	\$1.92	\$6.00	\$0.64	
		{	7.40	2.04	6.03	.67				{	7.28	1.92	6.00	.64
		{	7.40	2.04	6.03	.67				{	7.28	1.92	6.00	.64
No. 2.....	5.17	{	7.25	2.08	}	5.19	{	7.25	2.06	
		{	7.25	2.08				{	7.25	2.06
		{	7.25	2.08				{	7.25	2.06
No. 3.....	5.24	{	7.22	1.98	6.00	.76	}	5.22	{	7.22	2.00	6.00	.78	
		{	7.22	1.98	6.00	.76				{	7.22	2.00	6.00	.78
		{	7.22	1.98	6.00	.76				{	7.22	2.00	6.00	.78
		November.						December.								
No. 1.....	\$5.36	{	\$7.76	\$2.40	\$6.90	\$1.54	}	\$5.36	{	\$8.07	\$2.71	\$6.73	\$1.37	
		{	7.76	2.40	6.90	1.54				{	8.07	2.71	6.73	1.37
		{	7.76	2.40	6.90	1.54				{	8.07	2.71	6.73	1.37
No. 2.....	5.20	{	7.38	2.18	}	5.20	{	7.75	2.55	
		{	7.56	2.36				{	7.83	2.63
		{	7.75	2.55				{	8.00	2.80
No. 3.....	5.28	{	7.63	2.35	6.50	1.22	}	5.33	{	7.75	2.42	
		{	7.63	2.35	6.50	1.22				{	7.75	2.42
		{	7.63	2.35	6.50	1.22				{	7.75	2.42

BUCKWHEAT.

	September.							October.							
No. 1.....	\$5.36	{	\$7.40	\$2.04	\$6.03	\$0.67	}	\$5.36	{	\$7.28	\$1.92	\$6.00	\$0.64
		{	7.40	2.04	6.03	.67			{	7.28	1.92	6.00	.64
		{	7.40	2.04	6.03	.67			{	7.28	1.92	6.00	.64
No. 2.....	5.17	{	7.25	2.08	}	5.19	{	7.25	2.06
		{	7.25	2.08			{	7.25	2.06
		{	7.25	2.08			{	7.25	2.06
No. 3.....	5.24	{	7.22	1.98	6.00	.76	}	5.22	{	7.22	2.00	6.00	.78
		{	7.22	1.98	6.00	.76			{	7.22	2.00	6.00	.78
		{	7.22	1.98	6.00	.76			{	7.22	2.00	6.00	.78
	November.							December.							
No. 1.....	\$5.36	{	\$7.76	\$2.40	\$6.90	\$1.54	}	\$5.36	{	\$8.07	\$2.71	\$6.73	\$1.37
		{	7.76	2.40	6.90	1.54			{	8.07	2.71	6.73	1.37
		{	7.76	2.40	6.90	1.54			{	8.07	2.71	6.73	1.37
No. 2.....	5.20	{	7.56	2.36	}	5.20	{	7.75	2.55
		{	7.56	2.36			{	7.75	2.55
		{	7.56	2.36			{	7.75	2.55
No. 3.....	5.28	{	7.63	2.35	6.50	1.22	}	5.33	{	7.75	2.42
		{	7.63	2.35	6.50	1.22			{	7.75	2.42
		{	7.63	2.35	6.50	1.22			{	7.75	2.42

	November.							December.							
No. 1.....	\$5.36	{	\$7.76	\$2.40	\$6.90	\$1.54	\$5.36	{	\$8.07	\$2.71	\$6.73	\$1.37	
		{	7.76	2.40	6.90	1.54			{	8.07	2.71	6.73	1.37
		{	7.76	2.40	6.90	1.54			{	8.07	2.71	6.73	1.37
No. 2.....	5.20	{	7.38	2.18	5.20	{	7.75	2.55	
		{	7.56	2.36			{	7.83	2.63
		{	7.75	2.55			{	8.00	2.80
No. 3.....	5.28	{	7.63	2.35	6.50	1.22	5.33	{	7.75	2.42	
		{	7.63	2.35	6.50	1.22			{	7.75	2.42
		{	7.63	2.35	6.50	1.22			{	7.75	2.42

TABLE 69.—*Minneapolis and St. Paul*——Retailers' coal prices, typical sale prices and gross margins, per net ton of white ash anthracite, by sizes, and by principal classes of business, for three representative dealers, September—December, 1916—Continued.

SCREENINGS.

Company.	September.								October.							
	Cost price.	Household.		Industrial.		Yard.		Cost price.	Household.		Industrial.		Yard.		Cost price.	Gross margin.
		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		Sale price.	Gross margin.	Sale price.	Gross margin.	Sale price.	Gross margin.		
No. 1.....	\$4.37	{.....		\$2.45	¹ \$1.92	{.....		\$3.00	{.....		\$2.36	¹ \$0.64	{.....			
		{.....		2.45	1.92	{.....			{.....		2.36	1.64	{.....			
		{.....		2.45	1.92	{.....			{.....		2.36	1.64	{.....			
No. 2.....	4.37	{.....		² 2.30	¹ 2.07	{.....		3.00	{.....		² 2.29	1.71	{.....			
		{.....		² 2.30	12.07	{.....			{.....		² 2.29	1.71	{.....			
		{.....		² 2.30	12.07	{.....			{.....		² 2.29	1.71	{.....			
No. 3.....	1.44	{.....		2.50	1.06	{.....		1.45	{.....		2.50	1.05	{.....			
		{.....		2.50	1.06	{.....			{.....		2.50	1.05	{.....			
		{.....		2.50	1.06	{.....			{.....		2.50	1.05	{.....			
	November.								December.							
No. 1.....	\$3.35	{.....		\$2.36	¹ \$0.99	{.....		\$1.65	{.....		\$2.52	¹ \$0.87	{.....			
		{.....		2.36	1.99	{.....			{.....		2.52	.87	{.....			
		{.....		2.36	1.99	{.....			{.....		2.52	.87	{.....			
No. 2.....	3.35	{.....		² 2.32	¹ 1.03	{.....		1.65	{.....		² 2.35	.70	{.....			
		{.....		² 2.32	1.03	{.....			{.....		² 2.35	.70	{.....			
		{.....		² 2.32	¹ 1.03	{.....			{.....		² 2.35	.70	{.....			
No. 3.....	1.46	{.....		2.61	1.15	{.....		1.46	{.....		3.08	1.62	{.....			
		{.....		2.61	1.15	{.....			{.....		3.08	1.62	{.....			
		{.....		2.61	1.15	{.....			{.....		3.08	1.62	{.....			

¹ Loss.² Contract.

In the contract sales, which were very small, there appears to have been an actual loss. The margin in yard sales is the smallest in size, though it shows important variations between its minimum and maximum limits. The margin on industrial trade is larger, but less variable, there being almost no difference between the minimum and maximum. The household trade margin shows the most variations and is the largest, yet it is much more uniform than the corresponding margins in Chicago.

The period covered by the above retail table opens and closes with the highest margins, the December margins being slightly above those of September in buckwheat, pea and grate, while in egg, stove and nut the December margins were slightly lower. In October and November there was a slight drop from the September levels.

Minimum and maximum margins.—There is no difference whatever between the minimum and maximum margins on grate coal which is used but little. In pea and buckwheat the range is largest, with stove, egg, and nut showing almost uniform price differences. These differences seem to have diminished from September to December, owing to a continuous increase in the minimum margins throughout the period, while the maximum margins dropped in October and November. It is significant that the minimum margins

steadily increased from September to December, while the maximum margins either remained stationary or decreased slightly during the same period. It demonstrates the paramount influence of the dock companies. In September, when no shortage of coal was in sight and when navigation was in full swing, the dock companies who control all the coal stocks set a high price. When the October and November demand, owing to mild weather, did not bring the expected rush of orders, the prices were dropped slightly. In December, when a shortage at the docks became apparent, with the navigation season closed, the dock companies advanced the price 25 cents on the average. This was the third advance in the price of anthracite in the Twin Cities during 1916, a 25 cent advance having taken place on May 1, and a 50 cent advance toward the close of May or at the beginning of June.

Cost prices.—Cost prices increased 5 cents on nut from September to December, 56 cents on egg and 10 cents on buckwheat, but remained stationary or even dropped on the other sizes. The ranges between the minimum and the maximum cost prices do not show any great variations in December as compared with September.

Sale prices.—Sale prices are "typical" prices, a number of such prices on actual sales around the 5th, 15th, and 25th of each month having been selected and averaged (see p. 176). Sale prices show comparatively steady levels. In household trade the increase amounts to from 10 cents to 42 cents, the smallest increase being in grate and the largest in egg. In industrial trade the increase ranges from 25 cents to 67 cents, the largest being on buckwheat. In yard sales the increase from September to December varies from 24 cents on pea to 70 cents on buckwheat.

EXHIBITS.

EXHIBIT I.

OPEN LETTER TO PRINCIPAL ANTHRACITE OPERATORS, MARCH 12, 1917, ON THE APRIL DISCOUNTS.

The Federal Trade Commission has sent the following letter to about 25 of the largest anthracite-coal producing companies. The letter points out that any indirect increase in spring prices of hard coal by omitting the customary reductions in price at that season of the year could not be justified on the basis of the figures of cost of production compiled by the Commission:

"It is rumored in the anthracite trade that the producing companies are intending either to withdraw or reduce the spring discounts this year, thus increasing the prices charged for anthracite coal. None of the large railroad coal companies has as yet announced its policy. The selling agent of one of the more prominent of the independent operators, however, has made the following announcement to the trade:

"Owing to a number of circumstances which have increased the cost of mining coal, we do not intend to make the usual spring reduction on anthracite."

"In its inquiry into the cost of mining anthracite, the report on which will be issued in the near future, the Federal Trade Commission has obtained detailed information on the cost of companies which mined in 1916 about 75 per cent of the total production of anthracite. This information, obtained directly from the records of the companies referred to, indicates no increase in average cost in the last four months of 1916, and further indicates an actual decrease of cost in the case of some of the companies whose costs of production are high. Judging from the tonnage produced in January, 1917, there is no reason to believe that costs thus far in 1917 would materially change the average shown by the figures compiled for September to December, 1916. Therefore, it is the opinion of the Commission that further increase in circular prices this spring by failure to grant the customary discounts could not be justified on the basis of increased cost. The Commission makes this statement in advance of its forthcoming report, because it is a matter of vital interest to the public that no unjustifiable increase of price should be made.

"This statement does not refer to the increases in circular prices of all anthracite in May, 1916, nor to the panic prices which have prevailed on part of the tonnage this fall and winter, concerning which the Commission will make a report in the near future. The cost data already compiled by the Commission, however, are conclusive against further price increases this spring."

EXHIBIT II.

INTERIM REPORT TO THE SENATE OF THE UNITED STATES ON ANTHRACITE PRICES.

MAY 4, 1917.

TO THE PRESIDENT OF THE SENATE OF THE UNITED STATES.

SIR: By direction of the United States Senate as expressed in resolution 217, Sixty-fourth Congress (Senator Hitchcock), the Federal Trade Commission has been engaged in an investigation of certain phases of the anthracite coal industry.

While that investigation was going forward, a "buying panic" developed in the autumn of 1916, and enormous increases in retail prices resulted. Continuing its general investigation, the Federal Trade Commission turned im-

mediate attention to this condition. The Commission, being about to make its report, finds that at this present moment, the symptoms of the former unwarranted panic are recurring, and that there is now imminent a repetition of the conditions obtaining last winter.

These conditions were intolerable, and the Commission now, therefore, without waiting the transmission of its complete report on past conditions, is moved to call to the attention of the Senate the danger threatening the consumers of anthracite coal and the steps thus far taken based upon the knowledge of the Commission and within the limitations of its power to avert that situation.

During the past week, daily conferences have been held with anthracite operators, with the officials of the United Mine Workers of America, with leading jobbers, and with retailers from various parts of the country.

The Commission is able to say that there now exists no good reason for a panic in the anthracite market, nor for any increase in the present selling price to consumers. On the contrary, the retail prices generally obtaining to-day are unwarranted.

The wage increase agreed upon on April 26, 1917, will involve an increased cost of production of between 24 and 30 cents a ton. The price at which leading operators have announced that they will sell, will not exceed this increase. This price is upon anthracite on cars at the mouth of the mine. There is no justification for a larger increase to be passed on to the consumer, and these mine prices will not justify present retail prices in many instances.

The new wage scale with the United Mine Workers is a beneficial and steadying factor in the industry. The Commission has received assurances both from responsible anthracite operators and from the miner's representatives that this will be a year of unusually large production. The mine prices announced for May reflect approximately the wage increase of last week. The Commission is assured that there is no reason why this price should not continue for the season and be subject to the usual summer discounts, namely, 40 cents per ton in May, 30 cents in June and 20 cents in July, and 10 cents in August.

The Commission believes that the custom normally followed by the majority of retailers of passing the benefit of these discounts on to the consumer, should be followed by the whole trade.

If the public is again so deceived as to indulge in a scramble for coal such as occurred last winter, the favorable situation above reported may be nullified. A demand for four months' coal in the single month of May will be most deplorable. If, on the other hand, purchases are made as usual, there will be no disturbance and small chance for speculators to fleece the public. The best thing that can happen now is for everyone to buy as has been his custom in former years. Such normal buying spreads evenly through the summer, and will insure a steady flow of the production of the mines through the channels of distribution, to build up usual supplies in the hands of consumers, and more especially to build up the normal stock piles of wholesalers and retailers at points far removed from the anthracite region. Many of these points must build up their winter supply during the summer when water transportation is available. Transportation will thereby be relieved of undue burdens and the coal will be steadily distributed during the summer against the needs of the winter.

During the coal panic of the winter of 1916-17, one of the greatest factors in the distressing and intolerable condition was the unwarranted and indefensible practice of using coal cars for warehouses. Coal was held in cars by speculators while shortage of cars was alleged as a cause of fuel shortage. The Commission calls your attention also to other activities of speculators in anthracite coal who perform no useful service in the distribution of the coal, but who insert themselves as a disturbing and clogging factor upon the industry and whose unearned profits are often much greater than those enjoyed by either miner or operator or honest dealer. These profits, in many instances more than 100 per cent, were paid by the consumer, together with enormous bills for car demurrage.

Within the scope of its powers, this Commission will continue to exert every influence to avert the threatened recurrence of the conditions obtaining in the winter of 1916-17. To this end the Commission proposes to secure complete current information, keeping close to the conditions of production, distribution, price at the mouth of the mine, price to jobbers, price to retailers, and price paid by the public.

The Commission will expose any unscrupulous wholesaler, jobber, or retailer who seeks to mislead the public into a belief that exorbitant prices are justifiable or that there is any necessity to join in a frenzied bidding to secure immediate delivery for car-future needs.

The Commission will compile this information at frequent intervals and will ask the cooperation of the patriotic newspapers of the country to the end that the public may be kept constantly informed of what, in justice and reason, it should be expected to pay for anthracite and as to the volume of the production and stocks on hand existing at such times. The Commission has assurances from the anthracite operators that in case of local shortages being called to their attention by the Commission the operators will relieve such local stringency immediately.

The agencies which handle and distribute coal after it leaves the mine and before it comes into the hands of the consumer have also been heard to say to the Commission, through numerous representatives, that they desire and will expect only a fair and reasonable profit for the useful labor and service which they perform.

The fair retail price at any place is the price at the mouth of the mine plus freight, plus the reasonable dealer's profit, and cost of local delivery. The May price at the mine of ordinary white-ash anthracite, allowing for the 40-cent discount, is approximately as follows:

	Gross ton (2,240 pounds).	Net ton (2,000 pounds).
Egg.....	\$4.05	\$3.61
Stove.....	4.30	3.84
Chestnut.....	4.40	3.93

So, then, anthracite coal consumers of the United States may feel assured, first, that there is an adequate supply of coal; second, that that supply will be taken out and prepared for use in a large and constant flow during the summer months; third, that in so far as the power of constant scrutiny and publicity are effective, the Federal Trade Commission will function; fourth, that prices at the mine will be reasonable and such as would not justify the average prices now being paid by consumers.

As to the price of coal to the consumer for the coming season, this leaves two problems for further action, either by the Congress of the United States or by some authority to be designated by Congress. First, the elimination of the element of speculation and the charging of an exorbitant price or the withholding from use of this necessity of life; and, second, the imperative need of keeping the coal moving from the point of its production to its final destination and of preventing coal cars from being held out of use for the purpose of speculative storage.

The Federal Trade Commission will have the honor to present to you at an early time a further and detailed report and recommendation upon the anthracite-coal industry.

Respectfully submitted.

JOSEPH E. DAVIES,
WILLIAM B. COLVER,
JOHN F. FORT,
Commissioners.

(Chairman William J. Harris did not sign, being in Chicago, engaged in a hearing on bituminous coal.)

EXHIBIT III

LETTER AND FORMS SENT TO INDIVIDUAL ANTHRACITE OPERATORS.

FEDERAL TRADE COMMISSION,
Washington, May 14, 1917.

GENTLEMEN: In furtherance of the determination of the Commission to use its utmost present powers in this emergency to promote moderate and stable prices in the anthracite industry, which it understands that nearly all the operators

themselves desire, there is inclosed a formal order of the Commission requiring you to furnish to it, weekly, until further notice, special reports of your total sales tonnage with reference to the price realized at mines, as called for on the attached forms. For your convenience a duplicate copy of the forms is inclosed for your files. Reports for each week should be mailed by the following Wednesday.

There is also inclosed a copy of the act under which the Commission requires your prompt and regular compliance with this order.

Forms 1, 2, 3, and 4 are to be filled out each week.

Very truly yours,

FEDERAL TRADE COMMISSION.

NOTE.—The forms referred to in the above letter of May 14 were canceled by the following letter of May 19 and the forms shown below were substituted for

EXHIBIT IV.

LETTER AND FORMS SENT TO INDIVIDUAL ANTHRACITE OPERATORS, SUPERSEDING THE LETTER OF MAY 14, 1917.¹
them.

FEDERAL TRADE COMMISSION,
Washington, May 19, 1917.

GENTLEMEN: The order and forms sent you under date of May 14, 1917, for the anthracite coal special report are canceled and the inclosed order and forms are substituted for them.

You will note that Forms 1 and 2 are for current weekly reports, and blanks will be currently furnished you. Form 2, on contract shipments, is intended for the information of the Commission, simply to keep it in touch with the shipments going into current market on the basis of earlier and different conditions, so that it may be in a position to assure the public that any high-priced shipments on such contracts do not represent the present price policy of the operators concerned. Form 3, on monthly production, by sizes, will be continued on similar monthly forms to be sent you later for May, 1917, and succeeding months.

If your entire output (except local sales at the mine) is sold on commission or otherwise by an exclusive selling agent or coal sales company, it is suggested that you may, if desired, arrange with the agent or sales company to make out these forms on your behalf, it being understood that you are responsible for the price policy under which your coal is sold. If your output (except local sales) is not sold by one agency or sales company, the report should be made by yourselves. Please advise to whom the Commission should look for the sending in of the reports for your company.

The Commission desires to emphasize to you its thought that the present situation calls for public-spirited effort on your part to protect the domestic consumers of anthracite by seeing to it that the normal proportion of domestic sizes is produced and, so far as within your power, is distributed in such a way (whether through retailers or jobbers) as to reach the domestic user.

Normal distribution of tonnage as in years past will best serve the interests of the consuming public.

Members of the staff of the Commission will be at Wilkes-Barre, New York, and Philadelphia in case you desire to consult them direct. Their addresses will be as follows:

Robert H. Vorfeld, Fort Durkee Hotel, Wilkes-Barre.

David P. Smelser, Hotel Flanders, New York.

L. C. Floyd, Hotel Walton, Philadelphia.

Very truly yours,

FEDERAL TRADE COMMISSION.

ANTHRACITE COAL SPECIAL REPORT.

Mail to Federal Trade Commission, Washington, D. C., on or before Thursday, each and every week, the information required on the attached Forms 1 and 2, for business of week immediately preceding. Consider the last week of each

¹ See Exhibit III.

month as ending with the last day of the month and the next week as beginning with the first day of the succeeding month.

Mail to Federal Trade Commission on or before May 31, 1917, the information required on Forms 3 and 4.

The information required by this report is ordered to be furnished pursuant to the power of the Commission under subdivision b of section 6, of "An act to create a Federal Trade Commission, to define its powers and duties, and for other purposes."

PENALTIES.

Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of \$100 for each and every day of the continuance of such failure. (Sec. 10, Federal Trade Commission act.)

Any person who shall willfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than \$1,000 nor more than \$5,000, or to imprisonment for a term of not more than three years or to both such fine and imprisonment. (Sec. 10, Federal Trade Commission act.)

ANTHRACITE COAL SPECIAL REPORT.—Schedule for individual operators.

Statement of orders accepted by you or your sales agents for egg, stove, nut, and pea sizes of anthracite coal during the week ending.....

Name of Company	Address
-----------------------	---------------

List on this form the total number of cars of egg, stove, nut, and pea sizes of anthracite for which orders were accepted (including contracts and arrangements entered into for future shipments) by you or your sales agents during the week ending....., within the price limits indicated.

N. B.—The number of cars listed must represent all coal for which orders were accepted (including contracts and arrangements entered into for future shipments and including orders, contracts, etc., for sales locally at the mines), during the week and the prices indicated mean gross selling prices (see note) in gross tons.

[illegible]

In case you or your sales agents have accepted any orders (including contracts and arrangements entered into for future shipments) for egg, store, nut, and pea sizes of anthracite at higher prices, state on separate sheet, duly signed, the following information for each order, contract, or arrangement at a higher price: Name and address of purchaser and (if known) of consignee, car numbers or name of barge, size and grade of coal, approximate tonnage, gross selling price on f. o. b. mine basis.

Note on meaning of "gross selling price."—"Gross selling price" for purposes of this report means the price at the breaker without deduction of applicable tonnage, gross tonnage, and other charges.

This report (Form 1) made and signed this day of, 1917.

.....
(Name of Corporation.)

By:

(Name and title of officer signing.)

Form 2.

ANTHRACITE COAL SPECIAL REPORT.—*Schedule for individual operators.*

Statement of weekly tonnage of egg, stove, nut, and pea coal shipped on contracts entered into before May 19, 1917.

Name of company..... Address

List on this form information required for all shipments of egg, stove, nut, and pea coal during the week ending....., on all contracts and similar arrangements (including contracts and arrangements for coal sold locally at the mines) made by you or your sales agents before May 19, 1917.

Name and address of purchaser.	Quantity of coal shipped.	Size and grade of coal.	Gross selling price. ¹	Remarks.
.....	<i>Gross tons.</i>			
.....				
.....				
.....				
.....				

¹ "Gross selling price" for purposes of this report means the price at the breaker without deducting for selling expenses, commissions to sales agents or coal sales companies, allowances, or rebates or claims of any character, demurrage, storage expense, short weights, etc.; and if coal is sold delivered, only the net freight or other net transportation charges are to be deducted.

This report (Form 2) made and signed this day of, 1917.

.....
(Name of corporation.)

By
(Name and title of officer signing.)

Form 3.

ANTHRACITE COAL SPECIAL REPORT.—*Schedule for individual operators.*

Statement of commercial production excluding fuel used in mining operations during January, February, March, and April, 1917.

Name of company Address

List on this form the gross tons of commercial production of anthracite, excluding fuel used in mining operations during January, February, March, and April, 1917.

Size.	January.	February.	March.	April.
Lump.....				
Broken.....				
Egg.....				
Stove.....				
Nut.....				
Pea.....				
Total.....				
Buckwheat.....				
Rice.....				
Barley.....				
Boiler.....				
Screenings.....				
Total.....				
Grand total.....				

This report (Form 3) made and signed this _____ day of _____, 1917.

By _____
(Name of corporation.)
(Name and title of officer signing.)

Form 3a.

ANTHRACITE COAL SPECIAL REPORT.—*Schedule for individual operators.*

Monthly statement of commercial production, excluding fuel used in mining operations. To be mailed on or before the 5th day of the following month.

Name of company Address

List on this form the gross tons of commercial production of anthracite, excluding fuel used in mining operations, during the month ending _____, 1917.

Size.	Total.
Broken and larger.....	
Egg.....	
Stove.....	
Nut.....	
Pea.....	
Buckwheat No. 1.....	
All other steam sizes.....	
Total.....	

This report (Form 3a) made and signed this _____ day of _____, 1917.

By _____
(Name of corporation.)
(Name and title of officer signing.)

EXHIBIT V.

LETTER AND SUPPLEMENTAL INSTRUCTIONS SENT TO INDIVIDUAL ANTHRACITE OPERATORS.

FEDERAL TRADE COMMISSION,
Washington, May 24, 1917.

GENTLEMEN: There is inclosed a sheet of supplemental instructions for Forms 2 and 4 of the special weekly reports you are to make on the forms forwarded you by the Commission's letter of May 19.

Please enter on Forms No. 2 and No. 4 sent you on May 19 the additional phraseology quoted in the second and fourth paragraphs of these supplemental instructions.

You will observe that on Form 2 as thus revised you are required to list the weekly shipments under all commitments on your books before May 19, except those cases where the gross selling price received is below or within the gross selling price named in the tabular headings on Form 1.

On Form 4, on the other hand, you are to furnish the data not on all commitments, but only on contracts or similar arrangements for continuing shipments. Also on Form 4 you need not list such contracts where the gross selling prices are within or below those named in the tabular headings on Form 1, but if there is any provision for an allowance or split premium the contract must be listed, no matter what the price is.

These supplemental instructions do not change the purpose of Forms 2 and 4, which is as announced in the Commission's letter of May 19.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

ANTHRACITE COAL SPECIAL REPORT INDIVIDUAL OPERATORS.

SUPPLEMENTAL INSTRUCTIONS FOR FORMS 2 AND 4.

Form 2.—In Form 2, the phrase "all contracts and similar arrangements" means all commitments on your books before May 19, 1917, whether for contracts and accepted orders for single shipments, or for continuing shipments.

On Form 2, after the words "May 19, 1917," just above the table add the following: "Except shipments at gross prices within or below the gross selling prices named in the tabular headings on Form 1."

Form 4.—In Form 4, the phrase "all contracts and similar arrangements" does not mean all commitments on your books before May 19, 1917, but means only contracts and similar arrangements for continuing shipments.

On Form 4, after the words "data required below," just above the table, add the following: "Such contracts or arrangements need not be listed if the gross selling price per gross ton is within or below the gross selling prices named in the tabular headings on Form 1, except that all such contracts or arrangements that provide for any allowances or split premiums described in the note on Form 4 must be listed regardless of price."

EXHIBIT VI.

STATEMENT FOR THE PRESS ON ANTHRACITE PRICES, MAY 22, 1917.

In its interim report of May 4 to the United States Senate the Federal Trade Commission promised that its utmost efforts would be used to assure fair distribution and fair prices of anthracite coal.

The Commission has sent agents into different parts of the country who will observe closely throughout the anthracite trade the operation of plans formulated at recent conferences of the Commission with operators, jobbers, and representative retailers for bringing prices down to moderate levels and keeping them there.

These field agents will report promptly to the Commission for appropriate action any renewal of the intolerable abuses that marked the activities of certain elements in the trade during recent months.

The independent operators have realized that the situation calls for public-spirited action on their part, and it is expected that they will reduce their present prices to moderate levels for the season and cooperate in every way with the Commission.

EXHIBIT VII.

LETTER SENT TO ANTHRACITE OPERATORS.

FEDERAL TRADE COMMISSION,
Washington, May 26, 1917.

GENTLEMEN: In view of possible misunderstanding of the Commission's view in the matter of the advantage of direct sales by anthracite operators, this letter is being sent to you and to all the other producers.

Each operator will, of course, determine for himself his policy regarding the customers or class of trade to which he will sell, but the Commission deems it only just to say that it has not intended to suggest any change in the normal course of distribution through such wholesale concerns as perform the necessary service of discharging, storing, and handling coal for the territory tributary to their docks or storage points.

Moreover, the Commission believes it would be a public advantage if operators continue, for the present at least, to sell to responsible jobbers sufficient coal for the requirements of their "regular customers," where they feel assured that the jobber will not speculate with the coal, and where refusal to sell would throw these "regular customers" into the market as "new customers" of operators in such a way as to produce an abnormal buying pressure through their efforts to get coal.

The Commission does believe that operators should make all proper and reasonable efforts to see that their coal is not at any time sold through jobbers who resell to other jobbers or who make abnormal and unreasonable profits on their sales to retailers or consumers. The Commission itself will use its powers to discourage jobbers from speculating in anthracite coal. To this end it will require from all jobbers special weekly reports of every sale, with full data which will enable the Commission to trace the coal and its price from the mine to the local destination.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary.*

EXHIBIT VIII.

LETTER AND ENCLOSURES SENT TO JOBBERS OF ANTHRACITE.

FEDERAL TRADE COMMISSION,
Washington, May 26, 1917.

In furtherance of the determination of the Commission to use its utmost powers in this emergency to promote moderate prices in the anthracite industry and to encourage stability in prices, there is inclosed a form for a special report requiring you to furnish to the Commission, weekly, until further notice, a statement of your total sales tonnage, with purchase data and gross profit on such sales.

These reports are to cover only "jobbing" business as distinguished from "wholesale" business. For purposes of this report "jobbing" business is the buying and selling of anthracite which is not physically received, discharged, and reloaded by you; and "wholesale" business is the buying and selling of anthracite which is physically received, discharged, and reloaded by you.

If your business is entirely or in part a jobbing business, you are required to report on the attached form each sale that is in the nature of a "jobbing" transaction as defined above. No transactions that are "wholesale" business in the sense just defined should be reported on this form.

Your attention is invited to the attached copy of a circular letter sent to all anthracite operators.¹

¹ See Exhibit VII, above.

The Commission desires to emphasize to you its thought that the present situation calls for public-spirited effort on your part to protect the domestic consumers of anthracite by seeing to it that only the normal margins are obtained and that, so far as within your power, the domestic sizes are distributed in such a way that household consumers shall receive their normal share of coal.

For your convenience, a duplicate copy of the form is inclosed for your files.

Members of the staff of the commission will be at Wilkes-Barre, New York, and Philadelphia in case you desire to consult them direct. Their addresses will be as follows:

Robert H. Vorfeld, Fort Durkee Hotel, Wilkes-Barre.

David P. Smelser, Hotel Flanders, New York.

L. C. Floyd, Hotel Walton, Philadelphia.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

ENCLOSURES.

ANTHRACITE COAL SPECIAL REPORT.

Mail to Federal Trade Commission, Washington, D. C., on or before Thursday, each and every week, the information required on attached form, for business of week immediately preceding.

The information required by this report is ordered to be furnished pursuant to the power of the Commission under subdivision b of section 6 of "An act to create a Federal Trade Commission, to define its powers and duties, and for other purposes."

PENALTIES.

Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of \$100 for each and every day of the continuance of such failure. (Sec. 10, Federal Trade Commission act.)

Any person who shall willfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than \$1,000 nor more than \$5,000 or to imprisonment for a term of not more than three years, or to both such fine and improvement. (Sec. 10, Federal Trade Commission act.)

LETTER TO ANTHRACITE OPERATORS.

A copy of the letter of May 26, 1917, to anthracite operators (Exhibit VII) was also enclosed with this letter to jobbers.

EXHIBIT IX.

SUPPLEMENTAL LETTER SENT TO JOBBERS OF ANTHRACITE.

FEDERAL TRADE COMMISSION,
Washington, June 9, 1917.

GENTLEMEN: The Federal Trade Commission wishes to define to the anthracite jobbers its attitude on certain points in connection with the special weekly reports required from the trade.

A national crisis now exists, in which high prices for necessities of life and of industry will hamper the vigorous prosecution of the war. The great majority of anthracite jobbers, recognizing this situation, are voluntarily limiting their profits not to what they can get, but to a reasonable return for the service they render, and are making their purchases only from the mines or selling agents of the mines and making their sales only to retailers or consumers.

The Commission heartily commends this action. It believes that the jobber can not justify his economic existence at a time like this on any other basis. It believes that the jobber's gross margin need not exceed 20 cents a ton on any sale (25 or 30 cents in the case of western jobbers), and that the bulk of the business will be carried on at margins less than these.

In case any jobber charges prices for anthracite which result in gross margins greater than these or is a party to unnecessary sales between jobbers, the Commission will be constrained, in pursuance of its public duty under the law, to immediately report publicly to the Senate the activities of such jobber by name.

Upon receipt of this letter the trade will have had full explanation of the Commission's opinion on these points, and it is hoped that further action will be unnecessary.

It should be noted that a statement of all sizes of anthracite sold is required in the weekly report, including both domestic and steam sizes.

Very truly yours,

FEDERAL TRADE COMMISSION,
By T. M. ROBERTSON,
Acting Secretary.

EXHIBIT X.

LETTERS AND FORMS SENT TO RETAIL COAL DEALERS OF
WASHINGTON, D. C.

FEDERAL TRADE COMMISSION,
Washington, May 24, 1917.

GENTLEMEN: The Federal Trade Commission is making an inquiry into the retail coal situation in Washington with reference to the supply being received, its cost delivered to the dealer's yard, and the prices quoted to consumers. Both anthracite and bituminous coal are covered in this inquiry.

The attached forms (1, 2, and 3) are to be filled out and mailed to the Commission not later than June 5, in accordance with the accompanying order. Any additional sheets that you may make out in answering these forms must be duly signed.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary.*

ANTHRACITE AND BITUMINOUS COAL SPECIAL REPORT.

Mail to Federal Trade Commission, Washington, D. C., on or before June 5, 1917, the information required on the attached Forms 1, 2, and 3.

The information required by this report is ordered to be furnished pursuant to the power of the Commission under subdivision b of section 6, of "An act to create a Federal Trade Commission, to define its powers and duties, and for other purposes."

PENALTIES.

Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of \$100 for each and every day of the continuance of such failure. Section 10, Federal Trade Commission act.

Any person who shall willfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than \$1,000 nor more than \$5,000, or to imprisonment for a term of not more than three years or to both such fine and imprisonment. Section 10, Federal Trade Commission act.

Retailers.

Form 1. Anthracite, page 1.

Anthracite and bituminous coal special report.

Name_____Date_____

Address _____

Statement of concerns (operators, selling agents, jobbers, or others) from whom you purchased coal in 1916-17, and tonnage purchased, ordered, and received.

Names and addresses of companies.	Tonnage received from each, Jan. 1 to May 1, 1916.	Tonnage ordered from each, Jan. 1 to Mar. 31, 1917.	Tonnage of orders accepted by each, Jan. 1 to Mar. 31, 1917.	Tonnage received from each, Jan. 1 to Mar. 31, 1917.
.....
.....
.....
.....
.....

Retailers.

Form 1. Anthracite, page 2.

Names and addresses of companies.	Tonnage ordered from each, Apr. 1 to May 31, 1917.	Tonnage of orders accepted by each, Apr. 1 to May 31, 1917.	Tonnage received from each, Apr. 1, 1917, to May 31, 1917.

This report (Form 1) made and signed this ____ day of _____, 1917.

(Sign here) _____

By _____

Retailers.

Form 1. Bituminous, page 1.

Anthracite and bituminous coal special report.

Name_____Date_____

Address_____

Statement of concerns (operators, selling agents, jobbers, or others) from whom you purchased coal in 1916-17, and tonnage purchased, ordered, and received.

Names and addresses of companies.	Tonnage received from each, Jan. 1 to May 31, 1916.	Tonnage ordered from each, Jan. 1 to Mar. 31, 1917.	Tonnage of orders accepted by each, Jan. 1 to Mar. 31, 1917.	Tonnage received from each, Jan. 1 to Mar. 31, 1917.
	</			

Retailers.

Form 1. Bituminous, page 2.

Names and addresses of companies.	Tonnage ordered from each, April 1, 1917, to May 31, 1917.	Tonnage of orders accepted by each, Apr. 1, 1917, to May 31, 1917.	Tonnage received from each, Apr. 1, 1917, to May 31, 1917.
.....
.....
.....
.....

This report (Form 1) made and signed this ____ day of _____, 1917.

(Sign here) _____

By _____

Retailers.

Form 2.

Anthracite and bituminous coal special report.

Name of dealer _____

Address _____

Stock and purchases of white ash anthracite:

	Egg.		Stove.		Chestnut.		Pea.	
	Net tons.	Cost per net ton f. o. b. yd.	Net tons.	Cost per net ton f. o. b. yd.	Net tons.	Cost per net ton f. o. b. yd.	Net tons.	Cost per net ton f. o. b. yd.
Stock Apr. 1, 1917.....
Received Apr. 1-Apr. 15.....
Received Apr. 15-Apr. 30.....
Total stock for month.....
Inventory May 1, 1917.....
Received in May inventory June 1, 1917.....

Price quotations, or asking prices, white ash anthracite, per net ton, sidewalk deliveries, April 1, 1917, to date:

Dates of price changes.	Egg.		Stove.		Chestnut.		Pea.	
	Household trade.	Industrial trade.	Household trade.	Industrial trade.	Household trade.	Industrial trade.	Household trade.	Industrial trade.
Apr. 1, 1917.....
.....
.....

This report (Form 2) made and signed this ____ day of _____, 1917.

(Sign here) _____

By _____

Retailers.

Form 3.

Stock purchases of bituminous coal:

Show each class of bituminous coal in separate column.

	Net tons.	Cost per net ton f. o. b. yd.	Net tons.	Cost per net ton f. o. b. yd.	Net tons.	Cost per net ton f. o. b. yd.	Net tons.	Cost per net ton f. o. b. yd.
Stock Apr. 1, 1917.....								
Rec'd Apr. 1-Apr. 15.....								
Rec'd Apr. 15-Apr. 30.....								
Total stock for mo.....								
Inventory May 1, 1917.....								
Received in May inventory June 1, 1917.....								

Price quotations, or asking prices, bituminous coal, per net ton, sidewalk deliveries, April 1, 1917, to date:

Show each class of bituminous coal in separate column.

Dates of price changes.				
Apr. 1, 1917.....				

This report (Form 3) made and signed this _____ day of _____, 1917.

(Sign here) _____

By _____

FEDERAL TRADE COMMISSION,
Washington, May 28, 1917.

GENTLEMEN: The Federal Trade Commission calls your attention to the fact that all the forms mailed the Washington retailers under date of May 24, 1917, should be filled out on the basis of *gross* tons and not *net* tons. On Forms 2 and 3, in each case, the words "net tons" should be corrected to read "gross tons."

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

FEDERAL TRADE COMMISSION,
Washington, May 31, 1917.

GENTLEMEN: The time within which the information required in the Commission's letter of May 24 is to be furnished is hereby extended from June 5 to June 10, 1917.

Dealers are notified that on Forms 2 and 3 under stocks and purchases they are to report the cost of coal to them on the car. This is not to include either the cost of unloading or the cost of cartage to their yards in case the yard does not have rail connection. For coal purchased from a coal dump and carted from the dump the purchase cost to be reported is the price paid for it at the dump without including the cost of cartage.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

EXHIBIT XI.

LETTER TO IMPORTANT SELLING AGENCIES AND ANTHRACITE OPERATORS WITH A LIST OF THOSE TO WHOM SENT.

FEDERAL TRADE COMMISSION,
Washington, May 26, 1917.

GENTLEMEN: Pittsfield, Mass., and the Berkshire region generally, Worcester, Providence, and Lowell, Mass., appear to be in urgent need of anthracite. With the improvement of embargo conditions in New England you will no doubt make every effort to ship a reasonable assignment of tonnage on the orders you have accepted from any customers you may have in those districts.

The Commission believes it will quiet the situation there and lead to more reasonable retail prices, if the dealers in those communities can be tided over with some immediate shipments.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

Important anthracite selling agencies.

RAILROAD COAL COMPANIES.

Hudson Coal Co., 26 Liberty Street, New York, N. Y.
Williams & Peters, 1 Broadway, New York, N. Y.
Lehigh Coal & Navigation Co., 437 Chestnut Street, Philadelphia, Pa.
Lehigh Valley Coal Sales Co., 90 West Street, New York, N. Y.
Lehigh & Wilkes-Barre Coal Co., 143 Liberty Street, New York, N. Y.
Susquehanna Coal Co., Commercial Trust Building, Philadelphia, Pa.
Philadelphia & Reading Coal & Iron Co., Reading Terminal, Philadelphia, Pa.
Delaware, Lackawanna & Western Coal Co., 120 Broadway, New York, N. Y.
Dickson & Eddy, 17 Battery Place, New York, N. Y.

INDEPENDENT OPERATORS AND SELLING AGENTS SELLING DIRECT TO THE RETAIL TRADE.

Whitney & Kemmerer, 143 Liberty Street, New York, N. Y.
Weston Dodson & Co. (Inc.), Bethlehem, Pa.
J. S. Wentz & Co., Land Title Building, Philadelphia, Pa.
Madeira, Hill & Co., North American Building, Philadelphia, Pa.
Thorne, Neale & Co., New Franklin Bank Building, Philadelphia, Pa.
Bulls Head Coal Co., Scranton, Pa.
Carbon Coal Co., Shamokin, Pa.
Connell Anthracite Mining Co., Scranton, Pa.
Cumbola Coal Co.
East Boston Coal Co., Kingston, Pa.
Ellsworth Coal Co., Pottsville, Pa.
Haddock Mining Co., Wilkes-Barre, Pa.
Healy Coal Co., Plains, Pa.
Humbert Coal Co., Scranton, Pa.
Kingston Coal Co., Kingston, Pa.
Geo. F. Lee Coal Co., Wilkes-Barre, Pa.
McCauley Coal Co., Pittston, Pa.
W. R. McTurk Coal Co., Philadelphia, Pa.
Meadow Hill Coal Co., Scranton, Pa.
Mt. Hope Coal Co., Carbon, Pa.
Mill Creek Coal Co., New Boston, Pa.
Northern Anthracite Mining Co., Lopez, Pa.
O'Boyle-Foy Coal Co., Pittston, Pa.
Pittston Coal Mining Co., Pittston, Pa.
Racket Brook Coal Co., Scranton, Pa.
Red Ash Coal Co., Wilkes-Barre, Pa.
St. Clair Coal Co., Scranton, Pa.
South Side Coal Co., Scranton, Pa.
Spencer Coal Co., Dunmore, Pa.
Spruks Coal Co., Scranton, Pa.

E. S. Stackhouse, Shickshinny, Pa.
 Traders Coal Co. Scranton, Pa.
 Estate of A. S. Van Wickle, Hazleton, Pa.
 West Mountain Coal Co., Jermy, Pa.
 Wolf Collieries Co., Freeland, Pa.
 Wolf Creek Coal Co., St. Clair, Pa.

OTHER OPERATORS SELLING THROUGH SALES AGENTS OR JOBBERS.

Archbald Coal Co., Wilkes-Barre, Pa.
 Beaver Valley Coal Co., Baltimore, Md.
 Black Heath Coal Co., Minersville, Pa.
 Buck Ridge Coal Mining Co., Shamokin, Pa.
 Butcher Creek Coal Co., St. Clair, Pa.
 Cambridge Coal Co., Pottsville, Pa.
 Carbondale Mining Co., Carbondale, Pa.
 Clearview Coal Co., Scranton, Pa.
 John Conlon Coal Co., Hudson, Pa.
 East Bear Ridge Colliery Co., Mahanoy City, Pa.
 East Lehigh Coal Co., Tamaqua, Pa.
 Emperor Coal Co., Minersville, Pa.
 Evans Colliery Co., Luzerne, Pa.
 Excelsior Coal Co., Shamokin, Pa.
 Girard Mammoth Coal Co., Mahanoy City, Pa.
 Gorman & Campion Co., Tuscarora, Pa.
 Moosic Mountain Coal Co., Marshwood, Pa.
 Minooka Coal Co., Scranton, Pa.
 Mount Jessup Coal Co., Peckville, Pa.
 Nay-Aug Coal Co., Scranton, Pa.
 Oak Hill Coal Co., Duncott, Pa.
 Pardee Bros. & Co., Lattimer, Pa.
 Peoples Coal Co., Scranton, Pa.
 Pine Hill Coal Co., Minersville, Pa.
 Plymouth Red Ash Coal Co., Scranton, Pa.
 Port Carbon Coal Co., Port Carbon, Pa.
 Scranton Anthracite Coal Co., Scranton, Pa.
 Shipman Coal Co., Shamokin, Pa.
 Trevorton Colliery Co., Shamokin, Pa.
 White & Co., Pottsville, Pa.
 Wilkes-Barre Anthracite Coal Co., Wilkes-Barre, Pa.

EXHIBIT XII.

LETTER AND FORMS SENT TO NEW YORK HOTELS.

FEDERAL TRADE COMMISSION,
Washington, May 25, 1917.

Representatives of the Hotel Association of New York City have requested the Federal Trade Commission, in connection with its anthracite coal investigation, to make an inquiry respecting the conditions surrounding the purchase of anthracite coal by the hotels of New York City. The Commission has prepared a schedule for such an inquiry and sends you herewith duplicate copies of it.

You are desired to fill out this schedule at your early convenience. One copy should be mailed to the Commission; the other may be retained for your files.

Very truly yours,

FEDERAL TRADE COMMISSION,
 By L. L. BRACKEN, *Secretary.*

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel_____

Address_____

Name of hotel company_____

Informant_____ Position_____

Address_____ Date_____

1. Purchases of anthracite coal during the years 1914, 1915, and 1916. List each purchase in an attached statement, as follows:

Date.	Quantity.	Size.	Grade.	Price per net ton (2,000 lbs.) de- livered in chute.	Purchased from—
.....
.....
.....
.....
.....
.....
.....
.....
.....

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel.....
Address.....
Name of hotel company.....

2. State storage capacity in net tons, in hotel or other places, for anthracite and for bituminous separately.

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.....
.....
.....

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel.....
Address.....
Name of hotel company.....

3. State average daily consumption in net tons by sizes and by seasons.

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.....
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.....

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel.....
Address.....
Name of hotel company.....

4. Furnish copies of all contracts for the purchase of anthracite during the period 1914-1916. (If verbal agreements, state essential terms.)

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.....
.....

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel.....
Address.....
Name of hotel company.....

5. State briefly the method by which you have obtained bids for the sale of coal from retailers, jobbers, or producing companies. If you have tried cooperative purchasing, please describe circumstances.

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.....

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel _____
 Address _____
 Name of hotel company _____

6. Have any retailers, jobbers, or producing companies refused to bid on your supply, or imposed restrictions as to the quantity or quality of coal they would sell you? If so, state the circumstances, names, and dates.

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel _____
 Address _____
 Name of hotel company _____

7. Have the retailers attempted to hinder you or your association from purchasing your supplies from jobbers or producing companies? If so, state the circumstances, names, and dates.

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel _____
 Address _____
 Name of hotel company _____

8. Do you believe there is any combination among the retailers with the idea of distributing territory? State the facts that form the basis of your belief?

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel _____
 Address _____
 Name of hotel company _____

9. In inviting bids for anthracite coal have you noted any of the following circumstances in connection with the prices in bids of retailers or jobbers? If so, please specify all details, including dates, names, tonnages, and prices.

(a) Identity of prices on bids submitted by different jobbers or retailers at the same time for the same sizes and grades.

(b) Wide differences in prices between high and low bids or offers, but restrictions as to amount of tonnage offered at low prices.

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel _____
 Address _____
 Name of hotel company _____

10. Have any of your orders been filled with coal of a quality inferior to what you had ordered or had received from same source in the past? If so, state the facts.

ANTHRACITE COAL INVESTIGATION—SCHEDULE FOR HOTELS.

Name of hotel _____
Address _____
Name of hotel company _____

11. Is there any evidence of collusion between the coal dealers and your employees with respect to recommending the purchase of any particular dealer's coal?

EXHIBIT XIII.

LETTER AND FORMS SENT TO RETAIL COAL DEALERS OF
PHILADELPHIA.

FEDERAL TRADE COMMISSION,
Washington, June 1, 1917.

GENTLEMEN: In connection with the investigation of the anthracite coal industry directed by the United States Senate, the Federal Trade Commission is making an inquiry into the retail coal situation in Philadelphia with reference to the supply being received, its cost delivered to the dealer's yard, and the prices quoted to consumers.

The Commission therefore requires you to furnish the information called for on the attached Forms 1 and 2, and mail them to the Commission not later than June 14, 1917. Any additional sheets that you may make out in answering these forms must be duly signed.

A franked envelope, requiring no postage, is inclosed for your convenience in replying.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

Retailers.

Form 1, page 1.

Anthracite coal special report.

Name _____ Date _____
Address _____

Statement of concerns (operators, selling agents, jobbers, or others) from whom you purchased antarctic coal in first five months of 1916 and 1917, and tonnage purchased, ordered, and received, in gross tons.

[illegible]

Retailers.
Form 1, page 2.

Names and addresses of companies.	Tonnage ordered from each, Apr. 1, 1917, to May 31, 1917.	Tonnage of orders accepted by each, Apr. 1, 1917, to May 31, 1917.	Tonnage received from each, Apr. 1, 1917, to May 31, 1917.
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.....
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.....
.....

This report (Form 1) made and signed this _____ day of _____, 1917.
(Sign here) _____
By _____

Retailers.
Form 2.

Anthracite coal special report.

Name of dealer _____
Address _____
Stock and purchases of white-ash anthracite.

	Egg.		Stove.		Chestnut.		Pea.	
	Gross tons.	Cost per gross ton f. o. b. yard.	Gross tons.	Cost per gross ton f. o. b. yard.	Gross tons.	Cost per gross ton f. o. b. yard.	Gross tons.	Cost per gross ton f. o. b. yard.
Stock, Apr. 1, 1917.....
Received Apr. 1-Apr. 15.....
Received Apr. 15-Apr. 30.....
Total stock for month.....
Inventory May 1, 1917.....
Received in May.....
Inventory, June 1, 1917.....

Price quotations, or asking prices, white-ash anthracite, per gross ton, sidewalk deliveries, normal haul, April 1, 1917, to date:

Dates of price changes.	Egg.		Stove.		Chestnut.		Pea.	
	Household trade.	Industrial trade.	Household trade.	Industrial trade.	Household trade.	Industrial trade.	Household trade.	Industrial trade.
April 1, 1917.....
.....
.....
.....
.....

This report (Form 2) made and signed this ____ day of _____, 1917
(Sign here) _____
By _____

NOTE.—Forms similar to the above forms for Philadelphia retail dealers were sent to dealers in many cities where complaint was made of inadequate shipments or of high prices.

EXHIBIT XIV.

PRESS STATEMENT ON ANTHRACITE, JUNE 5, 1917.

FEDERAL TRADE COMMISSION, *June 5, 1917.*

In its efforts to insure that the consumer gets anthracite coal at moderate prices the Federal Trade Commission is requiring operators to report weekly all orders accepted, together with the price for the same.

The producers of a very great proportion of the tonnage are selling their output at moderate prices so that the high premiums charged by a number of operators during recent weeks are beginning to disappear from the market.

As a basis for publicity, within the powers of the Commission, costs of production are being secured from any operators who continue to maintain unjustifiably high prices.

The Commission is also getting monthly production statistics by sizes from all the anthracite mining companies, and anthracite jobbers are required to furnish the Commission a weekly report giving complete purchase-and-sales data and gross profits on each transaction. With this information the Commission can trace all jobbed anthracite from the mine to the retail yard.

Agents are in the field keeping in close touch with the prices charged by retailers in various parts of the country so that distribution and prices are being traced all the way from the mine to the consumer.

EXHIBIT XV.

GIRARD ESTATE LEASE.

AGREEMENT—LICENSE, RIGHT, AND PRIVILEGE TO MINE COAL.

City of Philadelphia, trustee under the will of Stephen Girard, deceased, to the Philadelphia & Reading Coal & Iron Co., Hammond colliery, for 15 years, from January 1, 1914, to December 31, 1928.

ARTICLES OF AGREEMENT, Made the ----- day of -----, A. D. nineteen hundred and thirteen (1913), between the City of Philadelphia, Trustee under the will of Stephen Girard, deceased, hereinafter called the Lessor, of the first part, and The Philadelphia and Reading Coal and Iron Company, a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, hereinafter called the Lessee, of the second part.

Witnesseth, That the Lessor doth grant, demise and let unto the Lessee, the exclusive license, right and privilege to mine, dig and carry away coal in and from all the beds or seams of coal lying northward of a pillar of coal to be established and located by the Engineer of the Girard Estate in each bed at or near the main synclinal axis of the valley of Shenandoah Creek and its prolongation westward, upon the tracts of land surveyed on warrants to Samuel Scott, James Chapman and John Alexander, situate partly in West Mahanoy Township, partly in Butler Township and partly in Girardville Borough, Schuylkill County, Pennsylvania, which, together with the colliery improvements, are known as and constitute Hammond Colliery, now operated by the said The Philadelphia and Reading Coal and Iron Company, also from all deposits of rock, culm, slate, waste and refuse coal which have been or shall be deposited upon the surface through the operation of the colliery working the above described beds of coal either under this or any previous lease.

For the term of fifteen (15) years from 12 o'clock midnight of the thirty-first day of December, in the year of our Lord nineteen hundred and thirteen (1913), until 12 o'clock midnight of the thirty-first day of December, in the year of our Lord nineteen hundred and twenty-eight (1928): Provided, the Lessee shall so long well and truly keep and perform each and every of the following covenants on its part to be kept and performed, which are the express conditions on which this lease is granted, and on the keeping and performance of which its existence depends.

In Consideration Whereof, the Lessee doth covenant, promise and agree as follows, viz:

To pay to the Lessor on the twentieth day of each month, before three o'clock in the afternoon of that day, at the office of the Superintendent of the Girard Estate, in the City of Philadelphia, a rent or royalty on all coal, culm or coal

dirt mined, dug and carried away from or sold for use on the demised premises during the preceding month, at the following rates:

For all coal, culm or coal dirt mined or dug from beds of coal over four feet in thickness, and for all coal, culm or coal dirt reclaimed from the deposits of culm, slate, waste and refuse coal which have been or may be deposited under this or any previous lease upon the demised premises, twenty per cent. (20%) of the average selling prices per ton of each size of coal at the breaker, received during the preceding calendar year by all the colliery lessees on the Girard Estate, excluding coal from culm banks except that which is prepared in conjunction with fresh mined coal.

For all coal, culm or coal dirt mined or dug from beds of coal four feet or less in thickness, sixteen per cent. (16%) of the said selling prices.

Provided, and it is hereby expressly understood and agreed between the parties hereto, that the royalty rates to be paid under this lease shall at no time be less than the following:

On Chestnut coal and on coal larger than Chestnut, forty-five cents (45c.) per ton.

On Pea coal, twenty-five cents (25c.) per ton.

On Buckwheat coal, fifteen cents (15c.) per ton.

On Rice coal and coal smaller than Rice, five cents (5c.) per ton; and that, if in any year the royalty rates as based on the selling prices in the manner provided above, shall be less on any size or sizes of coal than the said minimum rates, then the rates to be paid for that year on said size or sizes shall be said minimum rates.

The measurements of the beds of coal shall be taken between the top and bottom slates without deduction for refuse of any kind, and shall be made jointly by the Mine Inspector of the Girard Estate, or other person designated by the Engineer of the Girard Estate, and by a duly accredited representative of the Lessee.

The average selling price per ton of each size of coal at the breaker shall be obtained by taking the prices per ton at the breaker received by each of the colliery lessees on the Girard Estate, and by applying these prices to the shipments made at each price by the said lessees.

The selling prices shall be the gross selling prices at the breaker without and deduction for expense of selling, or for any expenses incurred after the coal is shipped, or for allowances, rebates, claims, demurrage, short weights, cost of storage, etc., and if in making the sale of the coal, the selling price agreed upon shall include delivery at any point other than the breaker of the colliery at which the coal is mined, then the selling price for the purposes of this lease, shall be the price so agreed upon less only the net freight due to or charged by the railway or other transportation agent which carries said coal to such other point of delivery.

It is also expressly understood and agreed that the selling prices of coal at the breaker as returned by the Lessee to the Lessor shall be the full prices received for the coal prepared, shipped or sold by it, and shall include all allowances, rebates, drawbacks, or any other form of payment made to it by any individual, corporation, financial agent, coal sales company or any other party to whom or in whose interest the coal from the demised premises may be sold or consigned.

It is also understood and agreed that no sale made to any party, or parties, controlled by the Lessee herein, or subject to the same control as the Lessee, or in which the Lessee shall have any interest direct or indirect, or which shall hold or control any interest direct or indirect in the Lessee, shall be admitted or used in determining the selling price of coal, except with the consent of the Lessor, but that such sale or sales may at the option of the Lessor, be entirely omitted in making the calculation to determine the average selling prices of coal at the breaker upon which to base the royalty rates.

To furnish to the Lessor on or before the twentieth day of each month a statement showing the gross prices per ton received during the preceding month by the Lessee for each size of coal shipped from the demised premises, provided that whenever it shall be impracticable to determine the prices received for the coal actually shipped from the demised premises, the average gross prices received by the Lessee for coal of a similar quality and classification shipped from the same region shall be accepted in lieu thereof; and the Lessor through its proper representative shall have the right to examine the books of original entry, showing the actual sales made by or for the Lessee, which books the lessee hereby covenants to produce at all times when called for

by the Lessor through its proper representative, for its use or inspection, for the purpose of determining the selling prices of the said sizes of coal.

And it is also expressly understood and agreed that the aggregate amount of money to be paid hereunder by any Lessee shall not be less than an average of eight thousand dollars (\$8,000) per month during the fourteen (14) years from 1915 to 1928, inclusive, and if in any month during the said years sufficient coal shall not be mined and removed to yield royalty which shall make the aggregate royalty payments during the term of this lease up to the end of the said month, equal in amount to the aggregate minimum payments above provided for, the Lessee shall nevertheless make the said minimum payments at the time and place provided for the payment of royalty, and having done so, shall have the right at any subsequent period during the term of this lease, to mine and remove, without payment of royalty, such a quantity of coal as shall at the rates of royalty herein provided for, yield a sum equal to the amount previously paid in excess of royalty due on coal actually mined. This right shall be limited by any termination of this lease.

It is also mutually agreed that no royalty shall be paid upon such a reasonable amount of coal mined from the demised premises as it may be necessary to use in the mining and preparation of the coal from the said premises; Provided, however, that no coal which may be retained by a screen having a mesh five-sixteenths of an inch in diameter, if round, and one-quarter of an inch measured at right angles to the sides, if square, except only the coal that may be required for blacksmith use, for outside colliery locomotives, for steam shovels, and, in cases of extreme necessity, with the written permission of the Engineer of the Girard Estate, under the boilers, shall be used for such purposes.

The Lessee doth further covenant, promise and agree as follows:

To pay as an additional rental to the Lessor at the time and place aforesaid a right of way charge of five cents (5c.) per ton on all coal from lands other than those owned by the Lessor brought upon or carried under, through or over the demised premises.

To screen and prepare for market the coal from the demised premises, and deposit all refuse therefrom, upon the demised premises or upon other land of the Lessor, unless written consent to do otherwise shall first have been obtained from the Lessor. If such consent is obtained and any of the coal from the demised premises is screened and prepared for market upon lands other than those of the Lessor, the Lessee shall pay to the Lessor, at the time and place aforesaid, in addition to all other royalties, a royalty of one cent (1c.) per ton upon all coal so screened and prepared for market.

It is understood and agreed that by the word "ton" as used in this lease is meant a "long" ton of twenty-two hundred and forty (2240) pounds.

That, in preparing for market the coal mined, dug or removed from the demised premises, the separation into sizes shall be regulated as follows:

Chestnut Coal shall be coal which will pass over a screen of woven wire, or cast or wrought and punched plates, as may be used, having a mesh round or square, as may be used, not more than seven-eighths of an inch in diameter if round, and three-quarters of an inch measured at right angles to the sides, if square.

Pea Coal, shall be all coal which, after passing through the mesh of the screen above described, will be retained by a screen of woven wire, or cast or wrought and punched plates, as may be used, having a mesh round or square, as may be used, not more than nine-sixteenths of an inch in diameter, if round, and one-half inch measured at right angles to the sides, if square.

Buckwheat Coal shall be all coal which, after passing through the nine-sixteenths of an inch round, or one-half inch square screen mesh above described, will be retained by a screen of woven wire, or cast or wrought and punched plates, as may be used, having a mesh round or square as may be used, not more than five-sixteenths of an inch in diameter, if round, and one-quarter inch measured at right angles to the sides if square.

Rice Coal shall be all coal which after passing through the five-sixteenths of an inch round, or one-quarter of an inch square screen mesh above described, will be retained by a screen of woven wire or cast or wrought and punched plates, as may be used, having a mesh round or square as may be used, not more than three-sixteenths of an inch in diameter, if round, and one-eighth inch measured at right angles to the sides, if square.

Barley Coal shall be coal which will pass through the three-sixteenths of an inch round or one-eighth inch square screen mesh above described.

That the quantity of coal carried away from the demised premises shall be ascertained as follows:

The Lessee shall cause the transportation company to which the coal is delivered for shipment to report, on or before the fifth day of each calendar month, to the Engineer of the Girard Estate at his office in the City of Pottsville, the full and actual weight of the coal so shipped during the preceding calendar month, making no deduction or allowance from the weight to cover water or dirt in the coal, or for any other purpose, or in case it is inexpedient or difficult for the transportation company to so report the full weight of the coal shipped, then the ordinary shipping weight shall be reported, and upon each report or certificate shall be stated the exact allowance or rates of allowance which have been used in determining the shipping weights. From the full and actual weights so obtained a deduction shall be made as follows:

For breakage and dirt, one-half of one per cent.;

For water in coal, if weighed at the colliery immediately after being loaded, on Pea Coal, two per cent.; on Buckwheat Coal, two and one-half per cent., and on Rice Coal and coal smaller than Rice, three per cent.; and the net weight so obtained shall be that upon which royalty is to be paid as above provided.

To furnish to the Engineer of the Girard Estate, at his office in the City of Pottsville, on or before the fifth day of each calendar month, during the term of this lease, and of the month immediately following its determination, the following statements in writing:

First—A statement from the shipping books at the colliery showing all coal mined and shipped therefrom, sold or donated to local trade or employees, or otherwise taken away during the preceding calendar month, said statement to be signed by the Superintendent of the colliery;

Second—A certificate of the transportation company over the tracks of which the coal is shipped, showing the weight of the shipments from the colliery during the preceding calendar month, prepared in accordance with Article VI of this lease;

Third—A statement showing the number of mine cars and their cubic contents of unprepared coal mined during the preceding calendar month from the land covered by this lease, also the number of mine cars if any, and their cubic contents received from other lands and prepared for market in conjunction with the coal mined from the land covered by this lease, and a statement showing the number of mine cars, if any, and their cubic contents of unprepared coal mined from the land covered by this lease, screened and prepared for market upon land other than that owned by the Lessor and the number of mine cars and their cubic contents of unprepared coal from all other sources prepared for market in conjunction therewith; from which statements the Engineer of the Girard Estate shall determine the number of tons of coal of each size mined and carried away from the land covered by this lease; Provided, however, that if either party to this lease shall have reason to believe that the coal mined from the land covered by this lease is of better or poorer quality and will therefore yield a greater or less quantity of prepared coal per cubic foot of unprepared coal than all or any of the coal from other lands prepared for market in conjunction therewith, then the Engineer of the Girard Estate or the General Manager of the Lessee may demand that each cubic foot of unprepared coal mined from the land covered by this lease shall be considered as producing a greater or less proportion of prepared coal than any or all of the coal from other lands. If such a demand made by the representative of either party hereto shall not be agreed to by the representative of the other party, or if the proportion of prepared coal to be allowed for each cubic foot of unprepared coal cannot be agreed upon by the representatives of the parties to this lease, these questions shall be submitted to a Board of Arbitrators to be chosen as provided under Article XXII of this lease.

Fourth—A statement showing the number of mine cars and their cubic contents of unprepared coal mined during the preceding calendar month from each slope, gangway, airway, breast or other opening in the demised premises, or from any pillar, where the thickness of the coal bed is four feet or less.

Fifth—A statement of the quantity, size, and character of the coal used during the preceding calendar month for making steam and for other purposes in the mining and preparation of the coal from the land covered by this lease.

And whenever requested to do so by the Engineer of the Girard Estate:

Sixth—A statement showing the length of each slope, tunnel, gangway, airway, breast or other opening driven during the preceding calendar month in

the land covered by this lease, together with the number of mine cars of coal obtained from each of such openings and from each pillar.

To pay as rent in addition to the rents or royalties above reserved and mentioned, all taxes, excise or duty that may be assessed or levied under any law of the United States, or of the State of Pennsylvania, now in force, or that may be enacted during the existence of this lease, upon the coal mined, prepared and used or sold by the Lessee and upon the breakers, washeries, buildings, dwelling houses, fixtures and improvements erected or used by it under this lease, and if such breakers, washeries, buildings, dwelling houses, fixtures and improvements shall be assessed to the Lessor, then the taxes so assessed to and paid by the Lessor shall on demand be repaid to the Lessor by the Lessee. And if the valuation of the said breakers, washeries, buildings, dwelling houses, fixtures and improvements be included in the valuation of the land and not enumerated or valued separately, then the Engineer of the Girard Estate shall annually ascertain and decide what proportion of the taxes shall be paid by the Lessee, and such portion of the taxes, if paid by the Lessor, shall be repaid on demand by the Lessee.

It is mutually agreed between the parties hereto:

That the Engineer of the Girard Estate shall designate from time to time on the surface of the demised premises, or on other land of the Lessor, sufficient space for the operation of the colliery thereon, and no other part of the surface shall be considered or held to be demised by these presents than such as may be so designated.

That the Lessee may, at its own cost and expense, erect upon the demised premises such dwelling houses as may be found necessary for the accommodation of miners, laborers and others employed by it in the operation of the colliery thereon, but such houses shall be erected only on such sites and in such a manner as may be designated by the Engineer of the Girard Estate, and shall never be used or occupied for any purpose other than that specified above. For each house thus erected by the Lessee, or which has been erected upon the demised premises and is used by the Lessee, or for each family, where more than one family shall occupy a house, the Lessee shall pay in addition to all other rents, or royalties reserved in this lease, an annual rent of six dollars, payable in monthly instalments of fifty cents, on or before the twentieth day of each month from and after the time when the ground shall be designated as aforesaid, and said monthly rental shall continue to be paid during the term of this lease by the Lessee as long as the said house shall remain upon the premises.

That the Lessee shall not deposit coal dirt, slate or rock from the mines upon any part of the surface of the ground, other than such as shall be designated and marked off for that purpose by the Engineer of the Girard Estate; it being understood, however, that it shall be the duty of the said Engineer to designate and mark off a sufficient part for the purpose of such deposit, and that the Lessor shall deliver to the Lessee possession of the surface so designated and marked off, unless the Lessor shall be prevented from so doing by an order of Court, or other legal proceedings. No deposit of coal dirt, culm or other refuse or waste material shall be made, permitted or suffered to be made by the Lessee in any stream of water, or so near to it that any portion of such deposits may be carried therein by the action of the elements. The Lessee shall be solely liable for all damages, loss or injury caused by the said deposits. Waste products of rock, containing no coal, and ashes or similar refuse shall be deposited separately from refuse containing coal, and waste products of rock, ashes, culm, refuse coal and waste products containing coal shall be deposited upon such portion or portions of the demised premises and in such manner as the Engineer of the Girard Estate may direct, and all such deposits of rock, culm, coal and waste material left upon the surface at the termination of this lease shall be the property of the Lessor.

That the Lessor reserves to itself and excepts out of this lease all springs and streams of water, timber, wood, stones, ores and minerals other than coal, with the right to divert, appropriate and use the water from any springs or streams, and to cut and take timber, wood, stones, ores and minerals other than coal, on any part of the demised premises, and also the right to occupy or demise any part of the surface for agricultural, horticultural or building purposes, provided that such diverting, cutting, taking, occupancy or demise shall not interfere with the mining operations of the Lessee, it being understood and agreed, however, that this proviso does not give to the Lessee any right to use the springs or streams of water, timber, wood, stones, ores and minerals other than coal, unless such right is specifically obtained in writing by the Lessee from

the Lessor; and provided further, that, in all applications for the surface, the application of the Lessee shall have the preference over that of other applicants, at the same terms and rents.

That it is an express condition of this lease, and the Lessee hereby agrees that it will not sell, or knowingly suffer or permit to be sold or exposed for sale on the demised premises, by any person, any malt, vinous, spirituous or intoxicating liquors and that any violation of this condition shall be a cause of forfeiture of this lease, and the Lessor may proceed as set forth in Article XXVI herein.

That the Lessee shall so far as is reasonably possible protect the demised premises from all trespassers, and shall not so far as the same can be reasonably prevented permit or suffer any buildings of any kind to be erected by trespassers or squatters on said premises, or, with the above stated qualification, permit any person, not acting under the authority of the Lessor, to cut or take therefrom any timber, coal or minerals of any kind.

That the Lessee shall open slopes, shafts or tunnels for mining coal from the beds of coal on the demised premises, of a size proper for a colliery producing at least three hundred thousand (300,000) tons of coal per year, and shall timber and secure the same in a substantial and workmanlike manner and shall install engines, pumps, and machinery for hoisting and hauling coal, of a size and power sufficient to hoist and haul without strain or injury three hundred thousand (300,000) tons of coal per year, and to keep the mines at all times free from water, and shall construct, erect and maintain the necessary breakers and improvements to properly prepare for market three hundred thousand (300,000) tons of coal per year. The Lessee shall drive all tunnels and gangways that may be necessary to open the beds of coal covered by this lease, and shall ventilate the mines in a workmanlike manner according to the most improved system of mining, and as prescribed by the mining laws of the State of Pennsylvania, and shall construct and keep open such air passages as, in the opinion of the Engineer of the Girard Estate, may be necessary for mining out and removing all the workable coal, and so that the mines may be worked and examined as far as is possible without danger to the miners or examiners. All the aforesaid improvements and machinery shall be such as are required for a first class colliery. The location and size of the said slopes, shafts, tunnels, gangways and air passages, and the location of the engines, pumps, breakers, machinery, ventilating apparatus, and other improvements shall be subject to the approval of the Engineer of the Girard Estate.

That the power reserved however is of approval only, not of direction or management, and that the Lessor shall not incur any responsibility by reason of such approval, but that the Lessee as between the parties hereto expressly assumes all responsibility and liability for any damage, loss or injury occasioned by the failure to properly conduct the mining operations on the demised premises.

That the Lessee shall, at its own cost and expense, keep and maintain in good working order and repair during the existence of this lease, the houses, buildings, engine houses, breakers, engines, pumps, machinery, railroads, slopes, shafts, fixtures and improvements, above and below ground, which may be necessary for the proper operation of the colliery, and which are now erected or constructed or may hereafter be erected or constructed upon the demised premises or upon other land of the Lessor.

That the mine or mines covered by this lease shall be operated in the best and most approved manner, and that at the expiration or sooner determination of this lease, they shall be delivered up to the Lessor free from water and fire and in such a secure and proper state that mining operations may be continued immediately throughout the full extent of the colliery as at that time opened and developed.

That the Lessee during the term of this lease shall at its own cost and expense keep the breakers, engines, machinery and improvements on the demised premises well and sufficiently insured from loss by fire, in an amount equal to at least two-thirds of their value, in such companies or competent insurance funds as the Lessor shall approve. The policies of insurance shall be so drawn that, in the event of a loss, the insurance money shall be paid to the Lessor. Should any portion of the insured property be injured or destroyed by fire, it shall be at once rebuilt or replaced by the Lessee, at its own cost and expense without any contribution by the Lessor other than the payment of the insurance money received by the Lessor, unless such rebuilding or replacing shall in the opinion of the Engineer of the Girard Estate be unnecessary for the

prompt, efficient and economical mining and preparation of the coal then remaining in or upon the demised premises, in which case the insurance money received by the Lessor shall be paid over to the Lessee.

If the Lessee shall fail to insure the breakers, engines, machinery and other improvements as above provided, or to renew the insurance from time to time, the Lessor may insure the said improvements and pay the premiums thereon, and such payments shall be considered as rent agreed to be paid by the Lessee and may be distrained for as rent in arrear. If the Lessee when requested to do so by the Lessor shall neglect or refuse to commence to repair and rebuild the breakers, engines, machinery and improvements for ninety (90) days after the occurrence of a fire, or shall refuse to prosecute such repairing or rebuilding with due diligence, such neglect or refusal shall be a cause of forfeiture of this lease.

That the Lessee shall comply in every respect with the laws now existing or hereafter enacted by the State of Pennsylvania or the United States, regulating the working of mines or providing for the safety of persons employed therein, and shall operate the mines in the demised premises continuously and with all due diligence, to the same extent that anthracite mines of the same capacity are for the time then being operated, taking into consideration the season of the year, the demand for coal and the facilities for transporting it to market, and shall leave no merchantable or workable coal abandoned or neglected in any of the beds or seams in said mines.

For the purposes of this lease merchantable or workable coal is defined to be coal that can be mined and prepared for market, by the most approved methods of modern mining, at a cost not greater than coal from similar beds or seams of coal, worked under similar conditions, is being mined for the time then being in the Anthracite Region of Pennsylvania.

It is expressly agreed between the parties hereto that the Lykens Valley, Little Buck Mountain, Buck Mountain, Seven Foot, Skidmore, Mammoth, Four Foot, Holmes, Primrose, Orchard, Diamond, Tracy and all other beds or seams of coal where found in workable condition shall be mined out and exhausted upon each level to the full extent possible under the best and most approved process of mining before the mining of coal on that level shall be discontinued or abandoned, unless the consent of the Engineer of the Girard Estate shall first be obtained for the leaving of coal in any of the above mentioned beds on any level, for the purpose of furnishing support to mine openings or to improvements or easements on the surface.

The question whether a coal bed or seam is workable or has been mined in accordance with the provisions of this lease is to be submitted, in case of disagreement or at the option of either party hereto, to arbitrators appointed as provided in Article XXII of this lease. If the decision of the arbitrators shall be in favor of the Lessor, and if the Lessee shall neglect or refuse for a period of sixty days after the decision of the said arbitrators to commence and vigorously prosecute operations looking to the mining of all of said beds or seams of coal in the manner herein provided, and in accordance with the findings of said arbitrators, then, as liquidated damages, and not as penalty, the Lessee shall pay to the Lessor the royalty which would have been due to the Lessor had the coal in all such beds or seams been mined as required by this lease and shipped to market, the amount so due to be determined by agreement between the parties hereto or by arbitration as provided in Article XXII of this lease.

That in case the Lessee shall for any reason which is not among the requirements of this lease leave unmined any merchantable or workable coal, when in the regular course of mining operations the time shall arrive for mining and removing said coal, the Engineer of the Girard Estate shall send to the Lessee a written notice calling attention thereto, and if the work of mining such coal is not commenced immediately thereafter, the quantity of coal so left unmined shall be estimated by the Engineer of the Girard Estate and royalty therefor as provided under Article II of this lease shall become due and payable to the Lessor at the expiration of ninety days from the date of the written notice above provided for, unless an appeal to a Board of Arbitrators be pending or unless the mining of said coal shall be enjoined by an order of Court, due and ample notice of the legal proceedings leading up to which shall have been given to the Engineer of the Girard Estate. The question as to whether the proper time has arrived for mining the said coal shall, in case of disagreement between the parties hereto, be referred to a Board of Arbitrators to be chosen as provided under Article XXII of this lease.

That all coal lying vertically or laterally under any railroad, township or other road located or to be located on the surface of the demised premises, or under any stream, pipe line, pole line, or other easement, or under any structure upon the said surface, is the property of the Lessor, and whenever in the regular course of mining operations the time shall arrive for mining and removing the said coal, it is to be mined and removed by the Lessee as if such railroad, road, stream, pipe line, pole line or other easement or structure were not located upon the surface above or near to said coal, and that it shall be the duty of the Lessee to use all reasonable and diligent efforts to procure the relocation of such railroad, township or other road, stream, pipe line, pole line or other easement or structure, and to proceed with the mining of the said coal or to pay royalty thereon, according to an estimate of the quantity of said coal made by the Engineer of the Girard Estate, unless the mining and removal of the said coal is restrained by an injunction or order of Court as above provided, or unless (when for any reason either of the parties hereto cannot or will not obtain a decision of the Court upon such question) the decision of a Board of Arbitrators shall be that the Lessee has been unable, after using reasonable and diligent efforts, to procure such relocation. The purpose and intent of this requirement is that the Lessee shall leave no coal unmined for the purpose of affording vertical or lateral support to any easement or structure upon or adjacent to the demised premises, when such easement or structure shall not have a proven legal right to such support, or for the support of any stream or other natural object which it is possible for the Lessee to remove to another location, unless the Lessee shall and will pay to the Lessor, for the privilege of allowing such supporting coal to remain unmined, the royalty which the Lessee would have been required to pay had said supporting coal been mined and shipped to market; provided that if the said railroad, road, pipe line, pole line, structure or other easement shall have been placed on the demised premises under an agreement with or by the written or formal consent of the Lessor, then the expense of removal, if such removal shall be deemed necessary or desirable by the Lessor, shall be borne by the Lessor. Questions as to the character, location and extent of and all other details relative to the pillar of coal which it may be necessary to leave unmined to support any railroad, road, stream, pipe line, pole line, easement, structure or natural object, shall, in case of disagreement between the parties hereto, be referred to a Board of Arbitrators, to be chosen as provided under Article XXII of this lease.

That if a decision of the Court or of a Board of Arbitrators relative to the right of support appertaining to any railroad, road, stream, pipe line, pole line, easement, structure or natural object upon the surface shall not be obtained, and if the Lessor shall notify in writing the Lessee to mine and remove any coal supporting such railroad, road, stream, pipe line, pole line, easement, structure or natural object, and the Lessee shall file with the Lessor a written statement setting forth its doubt of its legal right to remove the said coal, then the Lessor may repeat such notice in writing, and require the Lessee to mine and remove the coal in question, the Lessor thereby, however, assuming, after having given said notice, all liability for loss or damage to any third party, which shall be legally adjudged to have been caused by the compliance of the Lessee with the said notice and requirement of the Lessor.

That the Lessor shall have the right and privilege of determining when any bed or seam of coal, or the outcrop of such bed or seam, shall be mined, and shall give notice of such determination in writing to the Lessee, who shall at once proceed to mine the coal contained therein; but should the Lessee for a space of ninety days after service of such notice by the Lessor, neglect or refuse to so mine the coal contained therein, then the Lessor, in addition to other remedies provided in this lease, shall, unless an appeal to a Board of Arbitrators be pending, have the right and privilege to mine, sell or lease to a third party such bed or seam of coal, or outcrop thereof, and nothing in this lease shall be so construed as to deprive the Lessor or any such third party of the right of full and free access, ingress and egress for the purpose of mining and removing said coal.

That if any question shall arise as to the necessity with respect to the interest of the Lessor, or any question as to the propriety or expediency, with respect to the interest of the Lessee, of mining any bed, seam or outcrop of coal, or any part thereof, or of selling or leasing the same to a third party, these questions shall be submitted to arbitrators, as provided in Article XXII of this lease.

That if the Lessee shall not begin on or before January 1st, 1916, to screen and prepare for market the coal in the deposits of culm, slate, waste and refuse coal which have been deposited under any previous lease upon the surface of the demised premises, and shall not continue to do so at a rate which will, according to the estimate of the contents of said deposits made by the Engineer of the Girard Estate, exhaust the coal in said deposits on or before January 1st, 1926, then the Lessor shall have the right and privilege to take for its own use, or sell, or lease to a third party, such deposits of culm, slate, waste and refuse coal, and nothing in this lease shall be so construed as to deprive the Lessor or any such third party of the right of full and free access, ingress, and egress for the purpose of screening and preparing for market the coal in said deposits.

That the Lessee shall maintain in the different beds worked, pillars of coal of such a size as will, in the opinion of the Engineer of the Girard Estate, be of sufficient strength to prevent any squeeze that might damage or destroy coal in any overlying bed, and the said pillars shall not be removed, disturbed, pierced or broken through at any point except with the consent of the Engineer of the Girard Estate first had and obtained.

That the Lessee shall not mine or excavate any coal within sixty (60) feet from the east and west boundary lines of the premises above described, and it is hereby declared that this lease does not extend under the surface to any part of the said premises which lies within sixty (60) feet from the said boundary lines; nor shall the Lessee make or suffer to be made any opening under ground into any adjoining land through the above barriers of sixty (60) feet, which it is intended shall remain as a protection from water accumulating and from fire occurring in the premises adjoining those covered by this lease.

That the Lessee shall not make, keep or maintain, or permit to be made, kept or maintained, any fires in said mines in stoves, grates, furnaces, mine locomotives or other engines, or in any way whatever, either for hauling, heating or for ventilating or for any other purpose, except with the written consent of the Engineer of the Girard Estate first had and obtained.

If at any time a fire shall be found to exist in any part of the mines, it shall be obligatory on the part of the Lessee to notify both the Engineer and the Mine Inspector of the Girard Estate of the existence and location of such fire at the earliest possible moment after it has been discovered.

The existence of a fire as above set forth, or of any fire in or to any slope, shaft, tunnel, airway, gangway, breast or heading, either in use or abandoned, or the existence of a fire in any part of the said mines, if such fire be occasioned by the act or neglect of the Lessee or its employees, and shall not be at once attacked with the greatest energy and extinguished as promptly as possible shall be a cause of forfeiture of this lease, and in the event of the occurrence or existence of the said conditions with respect to any fire, the Lessor may at its option declare this lease forfeited, and may forthwith enter upon and take possession of the demised premises.

That the Engineer of the Girard Estate or other representatives of the Lessor shall have the right at all times to examine the mines, breakers, fixtures, machinery and improvements of every kind on the demised premises, and on all lands from which coal may be prepared for market in conjunction with coal from the demised premises, without let or hindrance by the Lessee or its employees, and also the right to examine the maps of the Lessee showing the mine workings and improvements in and upon the demised premises and in and upon all lands operated in conjunction therewith, and to take notes therefrom and make tracings thereof, and the Lessee when requested to do so by the Engineer of the Girard Estate, shall furnish to him such blue-prints of said maps as he may desire.

That if all the coal capable of being mined or shipped to market under this lease has been so mined or shipped, and if this fact shall have been determined by agreement between the parties hereto, or in case the parties do not so agree, by the finding of a Board of Arbitrators as provided under Article XXII of this lease, then this lease shall terminate in the same manner and subject to the same conditions as those agreed upon for a termination on December 31st, 1928.

That if the colliery shall be exhausted to such an extent as to render it impossible to maintain its minimum annual production at the tonnage required by the terms of this lease, and if this fact shall have been determined by agreement between the parties hereto, or by the decision of arbitrators as provided under Article XXII of this lease, then that portion of Article XIII fixing the capacity of the colliery improvements and machinery, and that portion of

Article II providing for minimum monthly payments, shall be modified by agreement between the parties hereto or by the decision of arbitrators as provided under Article XXII of this lease, in such manner as to make these terms fair and equitable under the changed conditions.

In case any dispute shall arise between the parties hereto relative to the interpretation of any of the terms of this lease, or as to questions of fact or opinion arising thereunder, the matter shall be referred to a Board of Arbitrators, to be composed of three disinterested and competent persons to be chosen in the following manner: One to be appointed by the Engineer of the Girard Estate, one to be appointed by the Lessee, and the two persons thus chosen to select a third. In case either party shall neglect or fail, for the space of ten (10) days after notice so to do, to appoint an arbitrator, then the other party shall appoint two, and the two thus chosen shall appoint a third. In case the two arbitrators are unable to agree within ten (10) days after their appointment upon a third arbitrator, then two or more of the Judges of the Court of Common Pleas of Schuylkill County shall be requested to designate a disinterested person to act as such arbitrator. In case the said Judges shall not for the space of ten (10) days after application made to them, appoint a third arbitrator, then two or more of the Judges of the Court of Common Pleas of the County of Philadelphia shall be requested to designate a person to act as such arbitrator. The award of the arbitrators, or of a majority of them, shall be final and conclusive.

That at the expiration of this lease, or sooner determination thereof, excepting in case of forfeiture, all the buildings, dwelling houses and improvements that have been or may be erected by the Lessee on the surface of the ground, including breakers, engines, machinery, fixtures and pumps, and beneath the surface in said mines all pumps, fans, stationary engines and motors with their connections, wire ropes, T rails, steam and water pipes and wiring installed by the Lessee, shall, if written notice of a desire to have an appraisalment shall have been given by the Lessor to the Lessee at least three months before such expiration, be valued and appraised by three disinterested and competent persons to be appointed in the manner provided for the appointment of arbitrators in Article XXII of this lease. The valuation of the appraisers, or of a majority of them, shall be conclusive of the value of said property, and the Lessor shall have the right, if written notice of its desire to exercise this right shall have been given to the Lessee at least one month before the expiration of this lease, to retain the said breakers, buildings, engines, pumps, machinery and improvements, or any of them, so valued and appraised, at the said valuation, deducting therefrom all rents, royalties, penalties and other sums due by the Lessee to the Lessor, which shall at that time be due and unliquidated. The Lessor shall also have the right, upon notice to the Lessee at least one month before the expiration of this lease, to use any or all of the property and improvements of the Lessee upon the demised premises for a period of not more than four months after the expiration of said lease upon payment to the Lessee of such compensation as may be agreed upon between the parties hereto, or fixed by arbitrators as provided in Article XXII of this lease. If the Lessor declines or refuses to retain all or any part of said property at the valuation as aforesaid, and has not exercised its right to use the property and improvements of the Lessee as above provided, then the Lessee, upon payment of all arrears of rent, royalties, penalties and other sums due to the Lessor, may at any time within four months after the expiration of this lease remove from the premises the said property or so much thereof as may not have been retained by the Lessor, as aforesaid, and if the Lessor shall have exercised its right to use the property and improvements of the Lessee as above provided, then the Lessee may at any time within four months after the cessation of such use, upon payment of all arrears of rent, royalties, penalties and other sums due to the Lessor, remove all of such property and improvements from the premises.

That upon the termination of this lease by the expiration thereof, all the mine openings and workings, including all loose coal therein and all timbering, property, machinery, fixtures and improvements whatsoever, below the surface of the ground, except pumps, fans, stationary engines with their connections, motors and electrical apparatus, wiring, wire ropes, T rails, steam and water pipes, shall, without any liability to make any compensation or payment therefor become and be the absolute property of the Lessor, and the Lessee shall not be at liberty to remove the same or any part thereof.

That, in the event of a forfeiture of this lease by reason of any violation by the Lessee of any of the covenants or conditions herein contained, the Lessee

shall not be entitled to have the improvements and fixtures referred to appraised or valued as herein provided, nor shall the Lessee be entitled to remove the same, or any part thereof, but said improvements and fixtures shall, upon the termination of this lease by forfeiture, be taken to be the absolute property of the Lessor without any compensation therefor.

That the Lessee shall not transfer, assign or mortgage or incumber with liens of any kind whatever the estate hereby granted, either in whole or in part, or sublet the demised premises or any part or portion of the same, or interest or associate therein any other person or persons, body politic or corporation, based upon the ownership thereof, without the written consent of the Lessor first had and obtained. And no judicial or other sale or transfer of any kind whatever, whether upon or under any writ, order or decree issued by or out of any court or by any justice of the peace, alderman or other judicial officer or tribunal, or by virtue of or in compliance with any order or decree of any court of equity or chancery or any proceedings in bankruptcy, shall have the effect of transferring this lease or the interest or title of the Lessee in or to the estate created by this lease, or any part or portion thereof, for any time or term whatever, to any other person or persons, body politic or corporation, without the written consent of the Lessor first had and obtained.

That the Lessor shall, in addition to all other legal remedies, have the right to distrain any goods and chattels on any part of the demised premises or upon other land of the Lessor for any of the rents or royalties, taxes, penalties, and sums of money herein reserved and mentioned, that may at any time be in arrear, and that all the laws relating to landlords and tenants shall be considered as extending to this lease and the estate created by it particularly for enforcing the payment of rent by distress and for the recovery of the possession of the demised premises at the expiration of this lease or sooner determination thereof.

That if the Lessee shall neglect or refuse to deliver to the Engineer of the Girard Estate any of the certificates or statements required under Article VII of this lease, or shall neglect or refuse to pay the rent or royalty or any other sum of money herein agreed by it to be paid, for thirty (30) days after the same shall have fallen due, or shall make default in the performance of any of the covenants of this lease, which are conditions which the Lessee hereby agrees to keep and perform, such neglect, refusal or failure shall, if persisted in for thirty days after service of written notice by the Lessor, be a cause of forfeiture of this lease, and this lease shall thereby, upon the expiration of said thirty days' notice, determine, and all the rights of the Lessee under it shall be forfeited, and this lease, in so far as it gives any interest to the Lessee, shall become null and void, and the Lessor, by its agent, may enter and take possession of the demised premises and remove therefrom the Lessee and all persons claiming under it; Provided, That the forfeiture of this lease and the taking possession of the demised premises by the Lessor shall not bar or preclude the right of the Lessor to recover any damages that may be sustained by the Lessor by reason of the default of the Lessee in keeping the covenants and conditions of this lease, nor shall such forfeiture and taking possession for the non-payment of rents or royalties, or for breach of any of the other conditions aforesaid by the Lessee, impair the right of the Lessor to recover any rents or royalties that may be in arrear, but for the purpose of recovery of damages and for the collection of the said rents or royalties by action or distress or otherwise the covenants to be kept and performed by the Lessee and herein contained shall be held and considered to be in full force and virtue. And Provided further, that there shall be no forfeiture of this lease for non-payment of rent or for any breach of these covenants, unless for thirty days after the happening of the event entitling to forfeiture, there shall have been persistence by the Lessee in such non-payment or in the act entitling to forfeiture.

That upon the failure or neglect of the Lessee to keep or comply with any of the foregoing covenants and agreements, covenanted and agreed by the Lessee to be kept and performed, the Lessor may and shall have full and entire power, right and authority:

a. To apportion the said rent or royalty, taxes and all other bills and charges due and payable as rent or royalty, and to distrain for the same, and for any amount due and payable, or made payable in advance, upon all personal property whatever of the Lessee upon the demised premises or upon other lands of the Lessor.

b. And without notice or form, to re-enter upon the said premises and eject and expel the Lessee and all others therefrom, any law, usage, or custom to the contrary notwithstanding;

c. And also to enter in the Court of Common Pleas of Schuylkill County an amicable action in ejectment for the premises above described, in which action the Lessor shall be the plaintiff and the Lessee shall be the defendant; and any attorney of said court is hereby authorized and empowered to sign such amicable action in ejectment for the Lessee, and further to appear for and confess judgment therein against the Lessee for the aforesaid premises, with costs of suit and release of errors, whenever the Lessee shall fail or neglect to keep or comply with any of the foregoing covenants and agreements on the part of the Lessee to be kept and performed.

d. It shall be lawful for the Prothonotary of said Court, and he is hereby requested by the Lessee, to enter said amicable action in ejectment for the above described premises in said Court;

e. And also to enter said judgment in said action for the Plaintiff and by confession against the Defendant without stay of execution for the above described premises, according to law, as in cases of ejectment, with judgment also for all costs;

f. Upon which judgment a writ or writs of possession or Habere Facias Possessionem shall issue in said action for said premises, with a clause of Fieri Facias for costs according to law, as in cases of ejectment;

g. And the Lessee also hereby empowers the Lessor, or any Attorney of any Court, to appear for the Lessee, in any action to be brought for any arrears of the rent or royalty hereinbefore reserved, and for all taxes, bills, and charges due and payable as rent or royalty which may at any time fall due, and to sign for the Lessee an amicable action, as if suit had been brought for any such arrears of rent or royalty, and for all bills due and payable as rent or royalty; and further, in said suits or in said amicable action, any attorney or Prothonotary is authorized to confess judgment against the Lessee, for all arrears of rent or royalty, and for all bills and charges payable as rent or royalty, which may at any time fall or become due under this lease, and for interest and costs; and so from time to time as often as any of said rent or royalty, and bills and charges payable as rent or royalty, shall fall due or be in arrear;

h. All of which proceedings shall be without the right to the Lessee to have an appeal, certiorari, writ of error, exception, motion, or rule to open any judgment entered as aforesaid or to stay or set aside any writ issued thereon;

And with a release to the Plaintiff, and its Attorney, and the Prothonotary and Sheriff of all damages and of all error in said proceedings;

i. It is also agreed, that all the remedies hereinbefore specified, set forth and reserved by the Lessor may be employed by the Lessor, its successors or assigns, against the successors of the Lessee, and against the assignee of the Lessee in case of the assignment by it of the estate hereby granted, with the consent of the Lessor, as hereinbefore provided in Article XXIV hereof.

j. And the Lessee doth hereby expressly waive unto the Lessor all and every privilege, benefit, and advantage given or extended to the Lessee, by any and all laws, usages and customs, exempting any personal property upon the said premises, or elsewhere, of the Lessee, or which may have been on such premises, from distress for rent or royalty or other bill or charge payable under this lease or from levy and sale under execution, or requiring an appraisement of goods distrained upon, or requiring notice or other proceedings by the Lessor to obtain possession of the said premises:

k. And the Lessee further covenants and agrees to pay all costs for distraining, levying, inventorying, appraising, selling and collecting, including as well the fees allowed the officers from the tenant, as those required to be paid by the landlord under any Act of Assembly;

l. And it is also agreed, that the Lessor may use and employ under this lease the remedies prescribed by law, or the remedies hereinbefore specified, set forth and reserved, or both, at the option and pleasure of the Lessor, and that no determination of this lease or taking or recovering possession of the premises shall deprive the Lessor of any remedy or action against the Lessee for rent or royalty or for damages for breach of any covenant herein contained, nor shall the bringing of any such action for rent or royalty or breach of covenant, nor the resort to any other remedy herein provided, for the recovery of rent or royalty, or damages for such breach, be construed as a waiver of the right to insist upon the forfeiture of this lease and to obtain possession in the manner hereinabove provided.

That any notice in writing in relation to any matter mentioned in this lease, addressed to the Lessee and left upon the premises with the superintendent, manager, clerk or other person in charge of the mines or of the office, or, if

there be no one in charge of the mines or in the office, posted on the door of the office, or upon the breaker or at the mouth of the slope, shaft or tunnel, shall have the same force and effect as if served personally upon the Lessee and ten (10) days shall be considered a full, legal and reasonable notice, except in cases where a longer notice is herein prescribed.

The Philadelphia and Reading Coal and Iron Company doth hereby constitute and appoint _____ to be its attorney, for and in its name and as and for its corporate act and deed to acknowledge this agreement before any person having authority by the laws of the Commonwealth of Pennsylvania, to take such acknowledgment, to the intent that the same may be duly recorded.

In witness whereof, the Lessor hath caused these presents to be executed by the President of the Board of Directors of City Trusts, and the Lessee hath caused its common or corporate seal to be hereunto affixed, attested by its proper officers the day and year first above written.

Sealed and delivered in the presence of—

_____ [SEAL]
President of the Board of Directors of City Trusts.
 THE PHILADELPHIA AND READING COAL AND IRON COMPANY.
 By _____
President.

Attest:

Secretary.

STATE OF PENNSYLVANIA,
County of Philadelphia, ss:

On the _____ day of _____ A. D. 1913, before me, the subscriber, a Notary Public in and for said State and County, personally came the above named Louis Wagner, President of the Board of Directors of City Trusts, and acknowledged his name as above written to be his own proper signature, and that the said agreement was signed by him for and in behalf of the said Board of Directors of City Trusts, in attestation that the above written agreement was sealed and delivered by the said the City of Philadelphia, Trustee under the will of Stephen Girard, deceased, by the direction and at the request of the said Board of Directors of City Trusts.

Witness my hand and notarial seal the day and year aforesaid.

My commission expires the _____ day of _____ 191____
Notary Public.

STATE OF PENNSYLVANIA,
County of _____, ss:

I hereby certify that on the _____ day of _____ in the year of our Lord one thousand nine hundred and thirteen (1913) before me the subscriber, a Notary Public in and for said State and County, personally appeared _____ the Attorney named in the foregoing agreement, and by virtue and in pursuance of the authority therein conferred upon him acknowledged the said agreement to be the act and deed of the said The Philadelphia and Reading Coal and Iron Company.

Witness my hand and Notarial seal the day and year aforesaid.

My commission expires the _____ day of _____ 191____
Notary Public.

EXHIBIT XVI.

WAGE AGREEMENT, APRIL 26, 1917.

Whereas, on May 5, 1916, an agreement was entered into by the parties hereto covering wages and working conditions in the anthracite field of Pennsylvania for the four-year period beginning April 1, 1916, and ending March 31, 1920; and

Whereas, by reason of conditions that have arisen as a result of the war, the parties hereto have deemed it advisable and necessary to increase the wage compensation provided in said agreement as hereinafter more specifically set forth:

Therefore, this agreement witnesseth:

First. That for the period May 1, 1917, to March 31, 1918, the compensation paid employees in the anthracite field shall be increased as follows:

(a) Contract machine and hand miners shall be paid an advance of 10 per cent on their gross earnings.

(b) Consideration miners shall be paid an advance of 10 per cent on their earnings based on the rates now in effect.

(c) Contract miners' laborers and consideration miners' laborers shall be paid an advance of 10 per cent on their earnings based on the rates now in effect. Day machine miners' laborers, receiving not less than \$2.72 per day, shall be paid an advance of 10 per cent on their earnings.

(d) Company men now receiving \$1.54 or more per day shall be paid an advance of 36 cents per day for each day worked.

(e) All employees paid by the day and now receiving less than \$1.54 per day shall be paid an advance of 30 cents per day for each day worked.

(f) Monthly men coming under the agreement of May 5, 1916, shall be paid an advance of 36 cents per day for each day worked.

(g) The advances of 36 cents per day and 30 cents per day above provided are to be applied to a day, whether eight hours or more, as established under the agreement of May 5, 1916; any proportionate part of a day to be paid proportionate part of the advances herein provided.

Second. It is distinctly understood and agreed between the parties hereto that because of the situation that has arisen as a result of the war and the needs of the Nation in the matter of fuel supply there shall be no unnecessary shut-downs, and that the employees will give that full cooperation necessary to maintain the production of the mines at their fullest capacity.

Third. It is further agreed that, except as hereinbefore provided, all of the covenants and conditions of the agreement of May 5, 1916, shall remain in full force and effect up to and including March 31, 1920.

In witness whereof the parties hereto have caused this agreement to be properly executed this 26th day of April, 1917.

On behalf of anthracite operators:

W. J. RICHARDS.
S. D. WARRINER.
MORRIS WILLIAMS.
W. L. CONNELL.

On behalf of the anthracite mine workers' organization:

JOHN P. DEMPSEY,
President District No. 1.
THOMAS KENNEDY,
President District No. 7.
JAMES MATTHEWS,
President District No. 9.

JOHN P. WHITE,
President United Mine Workers of America, representing anthracite mine workers' organization.

EXHIBIT XVII.

WAGE AGREEMENT, MAY 5, 1916.

This agreement made this 5th day of May, 1916, between districts 1, 7, and 9, representing the Anthracite Mine Workers' Organization, parties of the first part, and the anthracite operators, parties of the second part, covering wages and conditions of employment in the anthracite region of Pennsylvania, witnesseth:

The terms and provisions of the award of the Anthracite Coal Strike Commission and any subsequent agreement made in modification thereof and supplemental thereto are hereby continued for a further period of four years ending March 31, 1920, except in the following particulars, to wit:

First. (a) The contract rates at each colliery shall be increased seven (7) per cent over and above the contract rates at each colliery, effective in April, 1912, as established by the agreement of May 20, 1912.

(b) The working day established by the Anthracite Coal Strike Commission shall be changed from nine (9) hours to eight (8) hours. All employees paid by the day or hour and coming within the classification of company men, except as hereinafter more specifically provided, shall be paid for a day of eight

(8) hours, the rate established under the agreement of May 20, 1912, for a day of nine (9) hours, subject to an increase of three (3) per cent.

(c) All company men working on the basis of an 8-hour day prior to April 1, 1916, shall receive an increase of seven (7) per cent over and above the daily or hourly rates established for their respective occupations by the agreement of May 20, 1912; except that hoisting engineers who were granted an 8-hour day in March, 1912, shall receive an increase of three (3) per cent over and above the rates established by the agreement of May 20, 1912; it being understood, however, that where three full shifts were substituted for two shifts in March, 1912, the rate of the three hoisting engineers shall be the same and the shifts shall alternate in the manner customary where continuous employment is required.

(d) All hoisting engineers working on a 9-hour basis prior to April 1, 1916, and whose duties require that they should continue to work nine (9) hours per day, shall receive an increase of seven (7) per cent over and above the 9-hour rate established by the agreement of May 20, 1912.

(e) All company men working on a daily basis in excess of nine (9) hours per day or on a monthly basis prior to April 1, 1916, shall continue to work on said basis and their wage, whether paid hourly, daily, or monthly, shall be increased seven (7) per cent over and above the rates established for their respective occupations by the agreement of May 20, 1912.

MACHINE MINING.

Second, Conditions having arisen in portions of the anthracite region necessitating the use of mining machines, the right of the operator to use such machine shall be unquestioned and the method employed shall be at the option of the operator. Where work is done by mining machines the following shall govern as the basis of payment to the several classes of labor employed in the undercutting, mining, and loading of coal:

(a) When machine mining is done on a day basis the rates paid shall not be less than the established colliery machine rates paid to the several classes of labor employed April 1, 1916; provided, that in no case shall the rate for machine miner be less than \$3.30 per day; for machine runner, \$2.70 per day; for machine miner's laborer, \$2.34 per day, and for machine runner's helper, \$2.34 per day. It being understood that these rates are agreed to as covering a new requirement and are applicable only to machine mining, subject, nevertheless, to three (3) per cent advance under the terms of this agreement.

(b) Where machine mining contracts cover the mining of a vein or section of a vein not heretofore mined, the contract rates shall be such as to enable the men employed in mining work to earn, on the average of all employed in each occupation, a daily wage not less than the rate established for said occupation in paragraph (a). Where mining machines replace contract miners cutting coal from the solid, the average daily earnings of the contract machine miners shall not be less than the average normal earnings of such contract miners in the territory where the mining machines are introduced and where the same vein conditions exist; provided, that where the average normal earnings of the contract miners are shown to be less than the day rate established in paragraph (a), the machine contract rates shall be so adjusted as to enable the machine miner, on the average, to earn a daily wage of not less than the day rate established in paragraph (a).

(c) The operator shall be assured of the full cooperation of the machine miner in the development and maintenance of efficient operation, and the day's earnings shall be based on a workday of eight (8) hours at the face as now provided in section 3 hereof.

EIGHT-HOUR DAY.

Third. An 8-hour day means eight (8) hours of actual work for all classes of labor, at the usual working place, exclusive of noontime, for six (6) days per week, if the operator desires to work his mines to that extent, excepting only legal holidays. The time required in going to and coming from the place of employment in or about the mine shall not include any part of the day's labor. Drivers shall take their mules from the stables to the usual working place before starting time and shall return them to the stables after quitting time, compensation for such service being included in the day rates established for this class of labor. If, because of breakdowns, repairs, or the requirements

of transportation, or other causes essential to efficient operation, it is found necessary to extend the normal workday of any employee, or any class of employees, the operator may do so, at his option, paying for overtime a proportional rate per hour as determined from the rates established under section 1 hereof.

Fourth. All grievances referred to the board of conciliation shall be heard and a decision rendered within 60 days from the date of reference to the board; provided that said period may be extended for such time as may be mutually agreed upon by the operator's representative and the mine workers' representative in the districts in which said grievance originates. If no decision is reached within sixty days after reference, or within the extension period thereafter, the board shall submit the case forthwith to the umpire for final decision as provided in the award of the anthracite coal-strike commission.

Fifth. The present prices of powder and miners' supplies as established at the several collieries in the region shall be continued without change throughout the term of this agreement.

Sixth. Under paragraph (d) of the agreement of May 20, 1912, the duty of the grievance committee shall be confined solely to the adjustment of disputes in cases where the foreman and employee have been unable to agree, and in the discharge of this duty they shall strictly comply with the provisions of said paragraph. (See note 1.)

NOTE 1.—Paragraph (d) of the agreement of May 20, 1912, reads as follows:

(d) At each mine there shall be a grievance committee consisting of not more than three employees, and such committee shall under the terms of this agreement take up for adjustment with the proper officials of the company all grievances referred to them by employees who have first taken up said grievance with the foreman and failed to effect proper settlement of the same. It is also understood that the member of the board of conciliation elected by the mine workers' organization or his representative may meet with the mine committee and company officials in adjusting disputes. In the event of the mine committee failing to adjust with the company officials any grievance properly referred to them they may refer the grievance to the members of the board of conciliation in their district for adjustment, and in case of their failure to adjust the same they shall refer the grievance to the board of conciliation for final settlement, as provided in the award of the anthracite coal-strike commission and the agreements subsequent thereto, and whatever settlement is made shall date from the time the grievance is raised.

Under paragraph (f) of the agreement of May 20, 1912, the grievance committee is given the sole authority of joining with the company officials in recording the rates existent April 1, 1902, as well as the rates established under the agreement of May 20, 1912. (See note 2.)

NOTE 2.—Paragraph (f) of the agreement of May 20, 1912, reads as follows:

(f) For the purpose of facilitating the adjustment of grievances, company officials at each mine shall meet with the grievance committee of employees and prepare a statement setting forth the rates of compensation paid for each item of work April 1, 1902, together with the rates paid under the provisions of this agreement and certify the same to the board of conciliation within 60 days after the date of this agreement.

Seventh. The board of conciliation is empowered to hear complaints relating to day rates appearing on colliery rate sheets as effective April 1, 1912, but which may be claimed to be obsolete as of that date on account of being supplanted by other rates. The board of conciliation may at its discretion, in case the rates are shown to have been manifestly obsolete, order such rates erased.

Eighth. Neither party to this agreement shall initiate or encourage legislation that would in any manner affect the obligations of this contract or impair any of its provisions.

On behalf of the anthracite operators:

W. L. CONNELL,

W. J. RICHARDS,

S. D. WARRINER,

MORRIS WILLIAMS.

On behalf of the Anthracite Mine Workers' Organization:

JOHN T. DEMPSEY,
President District No. 1.

THOMAS KENNEDY,
President District No. 7.

JAMES MATTHEWS,
President District No. 9.

JOHN P. WHITE,
President of United Mine Workers
of America, representing An-
thracite Mine Workers' Organi-
zation.

Attest:

ALVAN MARKLE, *Chairman.*

JAMES A. GORMAN, *Secretary.*

EXHIBIT XVIII.

BITUMINOUS COAL REPORT.

[House Document No. 152. Sixty-fifth Congress, first session.]

FEDERAL TRADE COMMISSION.

Washington, May 19, 1917.

To the SPEAKER OF THE HOUSE OF REPRESENTATIVES:

SIR: Pursuant to a resolution introduced by Congressman Rainey in the Sixty-fourth Congress (H. R. 352) directing this Commission to make inquiry into the conditions in the production and distribution of bituminous coal, the Federal Trade Commission presents the following report. This report is preliminary and not final.

Of late there has been a marked change in the conditions of bituminous coal production and distribution. The Federal Trade Commission has taken cognizance of these facts. There have been recently held by the Commission a series of conferences in Washington and in Chicago. At these conferences there appeared before the Commission representatives of the following interests:

(1) Operators engaged in the mining of bituminous coal.

(2) Transportation lines, appearing as large consumers and carriers of bituminous coal originating on their lines.

(3) Representatives of municipal public utilities, manufacturing and other industrial enterprises, which are important consumers of bituminous coal.

Each of these three classes has been heard in detail, both orally and by the presentation of such written statements as they desired to make. A large mass of information has thus been gathered. The present report is based on this information, together with that previously obtained in this investigation.

THE PRESENT SITUATION.

There is no scarcity of coal in the ground. There is sufficient coal available in the bituminous coal mines now being operated not only to supply the present demand, but also to supply a greatly increased demand. At present, however, there is a shortage of bituminous coal at the points of consumption. In the East the principal use of bituminous coal is in the making of steam for transportation and industrial use; in the Central States and the South, while most of the output is used in making steam, a part goes into domestic consumption. The unprecedented demands for this fuel during the past six months, together with the difficulties of rail and of water transportation (particularly by water to the markets of New England, the Great Lakes region, and along the Ohio River), have not only absorbed the coal as fast as it could be shipped from the mines, but have also led to almost complete exhaustion of the coal stored at tidewater points and at the docks on the Great Lakes.

In the face of a probably greatly increased demand for bituminous coal on the part of the Government for military purposes, for increased transportation, for the manufacture of munitions of every description, and for many other forms of industry, the necessity of mining and distributing more bituminous coal than ever before, both to supply current needs and to replenish exhausted storage, is obvious. The country faces a serious state of affairs in obtaining a commodity which is basic to practically every form of its military and industrial activities. Several of the other belligerent countries have had to meet this same problem, and finding their coal supply seriously endangered, they have taken far-reaching governmental action to safeguard it. In England the Government took complete control of the coal mines after less radical methods of regulation failed. The French Government has drawn up a scheme for dividing France into three coal zones in order to equalize distribution, and the Government becomes the sole vendor. On May 2, 1917, the Russian provisional Government took over all the coal mines of that country with a view to control coal distribution and prices. Soon after the outbreak of the war Germany took measures to centralize the whole coal industry of the Empire under Government control. The Italian Government imports all the coal brought into the country and acts as a clearing house for its distribution.

Recognizing the importance of this problem in the United States and the seriousness of the fuel situation, the Federal Trade Commission is making this preliminary report, based on its investigation thus far, with the thought that its information relating to the causes of this situation and its suggestions as to possible remedies may be of value to the present Congress.

CAUSES OF THE PRESENT SITUATION.

(1) *Increased demand.*—The marked increase in demand began to be felt about six months ago. In 1916 the shipments of bituminous coal from the mines amounted to about 509,000,000 tons, or about 66,000,000 tons more than in 1915, when previous records in production had been surpassed. Nevertheless, the demand has recently increased to such an extent that not only the unprecedented output of 1916 has been consumed, but stored coal accumulated from the production of previous years has also been practically exhausted. For example, on the docks of Duluth and Superior there have usually been carried over at the opening of navigation some 3,000,000 tons, but this year when navigation opened the docks were practically empty.

The increased demand has been largely due to industrial expansion and to increased railroad traffic. In many industries plants have run two or even three shifts, while most railroads have transported more freight tonnage than ever before. In some sections of the country, particularly in the Northwest, an exceptionally cold winter led to the consumption of more bituminous coal than usual for heating purposes.

(2) *Shifting of markets.*—Much of the increase in demand was concentrated in certain localities. There were transportation difficulties due to unprecedented burdens laid by all classes of freight on both rail and water transportation facilities. All this led to a considerable shift to other sources of supply in the markets usually supplied from certain coal fields. For example, coal mined in western Pennsylvania, eastern Ohio, and West Virginia did not reach the markets of the Great Lakes and the lower Ohio in the usual quantities. This was because of increased demand from nearer markets, car shortage, decreased lake transportation facilities, low water for a considerable period on the Ohio River, and floods in the West Virginia mining region. Consequently the Indiana-Illinois fields have been drawn on to supply the deficit. Thus the tonnage in commercial shipments (i. e., coal not for use of railroads) sent to Michigan from the mines of the Illinois-Indiana fields is reported to have been over seven-tenths as great during the nine months from April to December, 1916, as it was during the entire year preceding.

One of the important results of this shifting of markets was a buyers' panic, due to the uncertainty of consumers with regard to getting coal from their regular sources of supply. This led in many cases to a frantic bidding of buyers against each other for that proportion of the coal supply (usually known as "spot" or "free" coal) which the mine operators were able to produce and ship in addition to the part of their output sold under contract. The proportion of "free" to "contract" coal has varied widely between different fields and mines, but the usual estimates are that from 70 to 90 per cent of the bituminous coal mined is usually sold under contract. Due to the inability of several of the coal fields to adequately supply their usual markets and to the great increase in the demand for coal, which had not been foreseen and contracted for by the consumers, the prices of "free" coal have risen enormously in all the markets.

(3) *Inadequate transportation facilities.*—While, as previously pointed out, there is no lack of coal in the ground, or of mines from which it can be obtained, the fact must be borne in mind that few soft coal mines are equipped to store coal. The coal must be loaded into railroad cars as fast as it comes out of the mine. As a general rule, miners do not go into the mine unless the cars necessary to take care of the day's output are on hand at the mouth of the mine. Cars enough to carry away the coal as fast as it can be mined are therefore a prime necessity. During the past six months, from a variety of causes, the railroads have not furnished, or have not been able to furnish, cars equal to the productive capacity of the mines. Furthermore, where coal has to be carried part of the way by water there has been difficulty in getting enough boats.

The principal causes for a lack of adequate rail transportation have been: Car shortage, embargoes on the movement of freight cars, lack of sufficient motive power, and, to some extent, abuse by shippers and consignees of reconsignment and demurrage privileges. Car shortage in some cases appears to have been due to lack of sufficient cars suited to carry coal, in others to the diversion to use in other industries of cars generally available for the movement of coal, and in others to the much longer hauls required, due to the shift of markets from their normal sources of supply, which required more cars than usual to distribute the same tonnage. Lack of terminal facilities adequate to handle the immense volume of freight consigned to certain points resulted

in great congestion at those localities. Railroads on whose lines the shipments originated had to place embargoes against shipments consigned to such destinations until the congestion could be relieved. In some cases there was also a lack of sufficient locomotives to move the coal from the mines to the consumer. Some of the car shortage appears also to have been due to abuses by shippers of reconsignment privileges and of consignees of demurrage privileges in the unloading of cars at destination. In some instances such reconsignment and demurrage privileges appear to have been used by mine operators and brokers as temporary storage in connection with speculation activities to obtain extortionate prices from coal consumers.

The principal causes for a lack of adequate water transportation have been: Diversion of boats in the coastwise coal trade to other lines of ocean traffic, diversion of boats in the lake coal trade to ocean traffic, and the conflict of the demand for iron ore and grain transportation with the demand for coal transportation. This conflict has occurred because of the higher freights paid for eastward-bound iron ore and grain transportation than for westward-bound coal. The delay incident to loading and unloading coal and the fact that three of the highly profitable grain or ore cargoes could be transported in the same time in which only two could be carried, if coal were taken westward, has resulted in boats, suitable for carrying coal going westward empty, using water as ballast instead of coal.

(4) *Labor conditions.*—Statements made at the Commission's hearings by mine operators from different coal fields indicate that in some regions there has been and still is an actual shortage of mining labor. The following reasons are generally ascribed: (1) The wages offered in other industries are often higher than those paid in the mines; (2) the lack of full-time employment in coal mines due to insufficient car supply often necessitates shutting down the mines from two to three days in the week, and sometimes running them only part of a working day. Since many of the men are paid on the basis of the tonnage they mine the resulting enforced idleness cuts down the actual wages received. (3) There has been a considerable emigration of alien miners, who have been called to the colors of the various warring European nations, and there has been little new immigration from any source to fill their places. Some of the southern mining fields have been seriously hampered by the movement of negro laborers to the North, generally to other industries than coal mining. This migration is probably ended.

(5) *Increased costs of production and distribution.*—Considerable information in regard to increases in costs of production and distribution was submitted by coal operators at the Commission's hearings, or was gathered directly by the Commission's agents. These increased costs, as far as production is concerned, are comprised chiefly in cost of labor. While there has been a great increase in the prices of supplies, the increase in the cost of supplies per ton of coal has been a much less important factor than is generally claimed. In the distribution there has also been some increase in cost, mainly in increased cost of transportation to the point of consumption.

The figures already submitted to the Commission in regard to costs and to prices at the mine show that most of the present prices now being charged both on "free" coal and on such few new contracts as the mine operators are entering into are far in excess of the costs as shown by the operators' books. Many of the operators frankly take the position that they are trying to get for their coal the highest price possible under the present demand, and are refraining, even at prices greatly increased over last year, from contracting their output to the extent of their usual custom. They defend this action by claiming that under the operations of the law of supply and demand they have for many years past been getting little more for their coal than the bare cost of production; that the mining of bituminous coal during that period has been a most unprofitable industry; and that this is their chance to recoup themselves for the losses of several years. Accordingly they are demanding prices at the mine to-day which run from 50 per cent to several hundred per cent over the cost of their output.

As a result of this policy much of the bituminous coal output has been auctioned off to the highest bidders. This has resulted in great profits to certain operators and in special hardship to municipal public utilities, hospitals, and other public and private charitable institutions and to domestic consumers, especially in the West and South, where relatively little anthracite is used.

(6) *Lack of sufficient storage facilities.*—The most economical way of handling coal is by loading it into cars as it comes from the mine, transporting it to

the point of consumption, and delivering it in the same car direct to the retailer or large consumer. At times there are adequate transportation facilities to keep the coal moving steadily in this way. But the consumption of bituminous coal is largely influenced by seasonal changes, the demand normally being heavy in fall and winter months and lighter in the spring and summer. This leads, in normal years, to frequent shutting down of mines, because of lack of orders, at a time when there are plenty of coal cars, and, conversely, to traffic difficulties at other times, largely due to inability to secure enough cars to care for the current demands. The obvious remedy for such a state of affairs is the establishment of storage facilities, preferably near the centers of consumption. But the relatively great expense of storing coal has prohibited any general establishment of adequate storage facilities. Thus it has happened that many times during the past six months the chief cities of the United States have been faced with a coal shortage which threatened to stop their street cars, cut off their electric light and power and their gas, and shut down the manufacturing industries which support their population.

(7) *Speculative activities of some mine operators and brokers.*—As already pointed out, from 70 to 80 per cent of the output of the bituminous coal is sold under contract by the mine operators. It is estimated that the railroads of the country consume about one-third of the total production of bituminous coal. Practically all of the railroad supply, in normal times, is under contract. Of the "free" coal produced by the mines, probably about half is sold by them direct to the consumer. The remainder of the "free" coal, and a small part of the coal sold under contract, reaches the ultimate consumer through the medium of middlemen, such as brokers and retailers. Charges of extortionate prices on the part of mine operators and brokers have been brought to the attention of the Commission. According to some informants, various mine operators and brokers, through abuses of the reconsignment and demurrage privileges granted by railroads in order to facilitate the regular distribution of coal, have created or increased local shortages and extorted exorbitant prices from the consumers. These charges are now under investigation by the Commission.

SUGGESTED REMEDIES.

The remedies which may be suggested for the present scarcity and high prices of bituminous coal relate to its production, transportation, and distribution. The most effective remedies deal with the improvement in the distribution of the present facilities for transportation. Many operators asserted at the hearings before the Commission that such remedies were the only ones necessary. On the other hand, the representatives of the railroads, municipal public utilities, and industrial consumers, while admitting the importance of such improvement, pointed out that there were other conditions which need remedy.

(1) *Improvement of transportation facilities.*—At the hearings of the Commission the fact was brought out that measures are being taken by the Interstate Commerce Commission and by the Council of National Defense which it is hoped will relieve transportation conditions. For railroad carriers additional regulations are being considered covering the distribution of open-top cars to the coal industry, the expediting of the movement of cars loaded with coal, and the return of the empty cars to mines, prevention of the abuse by speculators of reconsignment and demurrage privileges, and the providing where necessary, of additional equipment for use in transporting coal, both cars and locomotives, either by acquiring new equipment or through possible changes in other lines of traffic, such as dispensing with passenger trains which are not absolutely necessary, and thereby releasing more locomotives for freight service.

For water carriers, remedies should be sought along the lines of requiring boats, suitable for coal carrying on the Great Lakes, to transport coal westward, instead of going back in ballast for grain and ore cargoes, and in adjusting the rail conditions so that there will be sufficient transportation facilities to carry the coal from the western Pennsylvania, eastern Ohio, and West Virginia mines to the loading docks on Lake Erie for prompt loading of the boats. The limited period that the Lakes are open to navigation makes it necessary that the carrying capacity of the boats be kept in continuous use. Early remedial action is necessary, because every week of the navigation season is of tremendous importance in preventing shortage of coal in the Northwest next winter.

The principal remedy suggested for conditions in the coastwise water transportation of coal, apart from the building of more boats, is the exemption from military use of tugs and barges absolutely necessary to transport not only the coal, but also the timber needed for mine use.

(2) *Improvement of labor conditions.*—It was developed at the hearings on the part of the operators that they anticipated that labor conditions in 1917 would permit, if mining operations could be kept steady by a continuous supply of cars, the production of as much coal as that mined in 1916, and some of them stated that with their present force they could mine an excess of from 15 to 20 per cent over their output in 1916. If this statement is accurate, the operators in the coming year will supply more bituminous coal than in 1916. The recent increases in wages and the better housing conditions at the mines, which are being provided for miners, will, many operators believe, not only hold their present force but to the extent to which they would attract additional labor would bring about an increased output.

It will probably be found necessary to exempt miners from the conscription law so long as they remain at work in the mines. The experience of Great Britain in this matter should be heeded, and the disastrous results which came from the enlistment of miners avoided. Everything should be done to encourage men employed in the coal mines to stay on their jobs and to realize that it is their duty, as patriotic citizens, not to leave the mine even to enlist, but to see that they are serving their country best by remaining at their labor to produce the commodity which is absolutely essential to sustain all the forces which must be quickened and employed in the prosecution of the war; that their post of honor is at the mine and not on the firing line.

(3) *Establishment of increased storage facilities.*—It is highly desirable that additional storage facilities be provided at points of consumption. Municipal and other public and semipublic utilities and institutions should safeguard themselves not only against being shut down but also against being forced by their urgent necessities to buy coal at exorbitant prices. The railroads, which consume about one-third of the bituminous coal mined, should increase their storage facilities and avoid the necessity of holding cars loaded with coal for railroad use.

(4) *Regulation by governmental authority for the distribution of coal.*—Under war-time conditions it may become the duty of the Government of the United States to take steps similar to those found necessary by the belligerent European countries, and not only regulate the distribution of the coal from the mouth of the mine to the ultimate consumer by allotting the quantity of the product which the different classes of consumers shall be allowed to purchase, but also to establish the prices to be paid by different classes of customers. Any prices thus established would probably have to be based on actual costs, with an allowance for a reasonable return on actual investment. In other words, the price of bituminous coal, which is a great public necessity, should be fixed according to the same general principle which has been established in the conduct of public utilities. At a time like the present excessive profits should not be permitted to be extorted from the public by producers and distributors of any prime necessity of life.

Respectfully submitted.

WM. J. HARRIS, *Chairman.*
JOSEPH E. DAVIES.
JOHN F. FORT.

Signing as to finding of fact.

WILLIAM B. COLVER.

EXHIBIT XIX.

BITUMINOUS COAL FORMS.

FEDERAL TRADE COMMISSION,
Washington, June 16, 1917.

GENTLEMEN: The Federal Trade Commission, in connection with its inquiry into conditions of production and distribution of bituminous coal, made pursuant to congressional resolution directing such inquiry, requires you to furnish it with the information called for on the accompanying question sheets.

A few of the questions ask for information similar in nature to that being reported by the larger operators to the United States Geological Survey. You are, nevertheless, requested to answer all questions on the attached forms. The Federal Trade Commission is cooperating with the United States Geological Survey and not duplicating its work. This request for information is

being sent to every operator, large and small, in your field whose address the Commission has been able to secure, and it is important that the information desired be obtained from all, at the same time and in the same form.

Very truly yours,

FEDERAL TRADE COMMISSION,
By L. L. BRACKEN, *Secretary*.

OPERATORS.

1. Name of informant and official position.
2. Number of mines operated and tonnage produced in 1916, and January-March, 1917.
3. How has labor force been affected by—
 - (a) Shutdowns due to car shortage?
 - (b) Higher wages paid in other industries?
 - (c) Strikes?
 - (d) Decreased immigration?
4. In what way and how much per ton mined has the cost of mining increased from January, 1916, to April, 1917?
5. Transportation features:
 - (a) How far have operations been affected—
 - (1) By car shortage?
 - (2) By railroad embargoes against certain localities?
 - (b) Has there been a similar shortage of cars for other industries located on railroads which serve your mines?
 - (c) Have you any direct information bearing on alleged use of coal cars for carrying other products?
 - (d) Have any of your coal shipments to customers been confiscated by carrier railroads; and if so, on what basis was settlement made?
6. Principal markets reached and classes of customers and approximate production of output sold, each class, such as—
 - (a) Government.
 - (b) Railroads.
 - (c) Municipal public utilities.
 - (d) Industrial consumers sold direct.
 - (e) Jobbing trade.
7. Proportions of business done on contract and on spot sales during coal year 1916-17.
8. Average prices received—
 - (a) For all shipments during first nine months of 1916? During last three months of 1917?
 - (b) On contracts for coal year of 1916-17? For coal year 1917-18?
 - (c) On spot sales during last three months of 1916? During first three months of 1917?
9. What direct information have you bearing on alleged practice of railroads to get contract prices unduly favorable to them, through promise of a full car supply?
10. What remedies do you suggest for the present situation?

RAILROADS.

1. Name of informant and official position.
2. How much coal used annually?
3. Where is this coal usually obtained?
4. Describe methods in purchasing.
5. To what extent is it bought from mines on railroad's own line?
6. How many contracts and for what tonnage of coal will shortly expire?
7. What is the situation as regards the making of new contracts?
8. What are the present prices for new contracts? How do they compare with the old?
9. What difficulties do you have in coming to terms with mine operators?
10. (To coal roads:) Extent of alleged practice of promise of cars to get prices on contracts favorable to railroad?
11. (To all roads:) What arrangements do you make for providing cars to operators for railroad coal?
12. How much coal have you had to confiscate and what was the method followed in payment?

13. Storage facilities.
14. What percentage of coal delivered on contracts?
15. What remedies do you suggest for present situation?

PUBLIC UTILITY AND INDUSTRIAL CONSUMERS.

1. Name of informant and official position.
2. How much coal used annually?
3. Where is this coal usually obtained?
4. Describe methods of purchasing.
5. How many contracts, and for what tonnage of coal, will shortly expire?
6. What is the situation as regards the making of new contracts?
7. What are the present prices for new contracts? How do they compare with the old?
8. What difficulties do you have in coming to terms with mine owners?
9. Storage facilities.
10. What percentage of coal called for on your contracts have you been receiving?
11. How much coal have you lost through confiscation by railroads?
12. What remedies do you suggest for present situation?

BITUMINOUS COAL—SPECIAL REPORT.

Mail to Federal Trade Commission, Washington, D. C., on or before July 10, 1917, the information required on the attached Forms 1 and 2 for the business of May, 1917. Information of this nature will hereafter be required monthly.

Mail to the Federal Trade Commission on or before July 10, 1917, the information required on Forms 3 and 4.

Duplicate forms for your convenience, should you wish a record in your files, are also inclosed.

Where a number of producers are selling through a common selling agency it may be found most convenient that such agency make one report for the total sales of all coal shipped by the group of producers. By advising the Federal Trade Commission of such condition, it can be arranged that the common selling agency shall make one report for such group on Forms 1 and 4.

PENALTIES.

* Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of \$100 for each and every day of the continuance of such failure. (Sec. 10, Federal Trade Commission act.)

Any person who shall willfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than \$1,000 nor more than \$5,000, or to imprisonment for a term of not more than three years, or to both such fine and imprisonment. (Sec. 10, Federal Trade Commission act.)

FORM 1.

Statement of coal shipped, gross tons, and average price per ton for the month of -----, 1917.

Grade and size of coal.	State all coal shipped.				Coal bought and resold.			Terms relative to allowances or split premiums. ¹
	Sold under contract.		Sold "spot" or "free."		Total gross tons.	Average price per gross ton.		
	Total gross tons.	Price received per gross ton.	Total gross tons.	Price received per gross ton.		Paid.	Re-ceived.	
Run of mine:								
Average price								
Maximum price								
Minimum price								
Lump:								
Average price								
Maximum price								
Minimum price								
Nut and slack:								
Average price								
Maximum price								
Minimum price								
Blacksmith:								
Average price								
Maximum price								
Minimum price								

¹ This is to include any allowance, "split premium," rebate, or payment of any sort to be made to operator or sales agent of operator by parties to whom or in whose interest the coal is sold on consignment.

This report (Form 1) made and signed this ----- day of -----, 1917.

Name of producer (if corporation, name and title of officer signing).

Form 2.

BITUMINOUS COAL SPECIAL REPORT—SCHEDULE FOR MINE OPERATORS.

1. Name of producer----- Address-----
2. What was your railroad rating in gross tons per day for the past month?

3. Total capacity in gross tons of cars received during the past month?-----
4. How many gross tons did you load during the past month?-----
5. How many men (exclusive of office force) worked in your employ at your mine during the past month irrespective of days worked by each?-----
6. How many men were you short?----- Give detailed explanation of shortage?-----
7. State wages paid by you to each of the following classes of labor during the past month. Where such wages correspond to the rates shown in column 1, place a check mark in column 2 opposite each rate paid. In column 3 state what rate you have paid to each class of labor, whether more or less than column 1.

Scale.	Column 1. Scale of wages.	Column 2. Check mark.	Column 3.
Minimum scale (operator):			
Pick mining, per gross ton, in rooms.....	\$0.8995		
Pick mining, per gross ton, in headings.....			
Machine loading, per gross ton, in rooms.....	.5572		
Machine loading, per gross ton, in headings.....			
Cost of yardage, deadwood, allowances, and all other compensation paid directly or indirectly to labor, expressed in average cents per gross ton.....			
Pushing cars both ways by miner, per gross ton.....	.05		
Inside day scale (per day):			
Motormen.....	3.70		
Spraggers.....	3.60		
Skilled wiremen, in charge of work.....	3.60		
Wiremen helpers.....	3.37		
Track layers.....	3.60		
Tracklayers' helpers.....	3.37		
Bottom cagers.....	3.37		
Drivers.....	3.60		
Trip riders.....	3.60		
Water and machine haulers.....	3.60		
Timbermen.....	3.60		
Pipe men.....	3.52		
Trappers.....	1.90		
Cutters.....	3.70		
Scrapers.....	3.45		
All other inside day labor not specified above.....	3.37		
Outside day scale:			
Dumpers.....	3.02		
Ram operators.....	3.20		
Pushers.....	2.78		
Trimmers.....	2.96		
Car cleaners.....	2.70		
Firemen now working on changing shifts of eight hours each.....	3.20		
Main hoisting and steam plant engineers, working on changing shifts of eight hours each.....	3.60		
All boys under 18 years of age.....	1.90		

This report (Form 2) made and signed this ____ day of _____, 1917.

Name of producer (if corporation, name and
title of officer signing).

Form 3.

BITUMINOUS COAL SPECIAL REPORT—SCHEDULE FOR MINE OPERATORS.

The information called for in the following questions should be answered separately for each mine operated:

1. (a) Is the coal loaded from mine cars over a tippie into railroad cars?
2. (a) Is it hauled from mine to railroad car by a wagon or motor truck?
- (b) What is the distance from the mouth of the mine to the siding on which railroad cars are loaded?
3. What is the number of men on your pay roll (excluding office force) during the period indicated below, irrespective of days worked by each.

1917

1916

January -----

February -----

March -----

April -----

May -----

This report (Form 3) made and signed this ____ day of _____, 1917.

Name of producer (if corporation, name and title
of officer signing).

Form 4.

Bituminous coal special report—Schedule for mine operators.

Name of Company..... Address.....

List all contracts or arrangements (whether formal agreements or informal agreements consummated verbally or by correspondence) in force May 31, 1917, for the sale or shipment of bituminous coal, giving data required below:

[illegible]

¹ This is to include any allowance, "split premium," rebate, or payment of any sort to be made to operator or sales agent of operator by parties to whom or in whose interest the coal is sold or consigned.

This report (Form 4) made and signed this ____ day of _____, 1917.

Name of producer (if corporation, name and title of officer signing).





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